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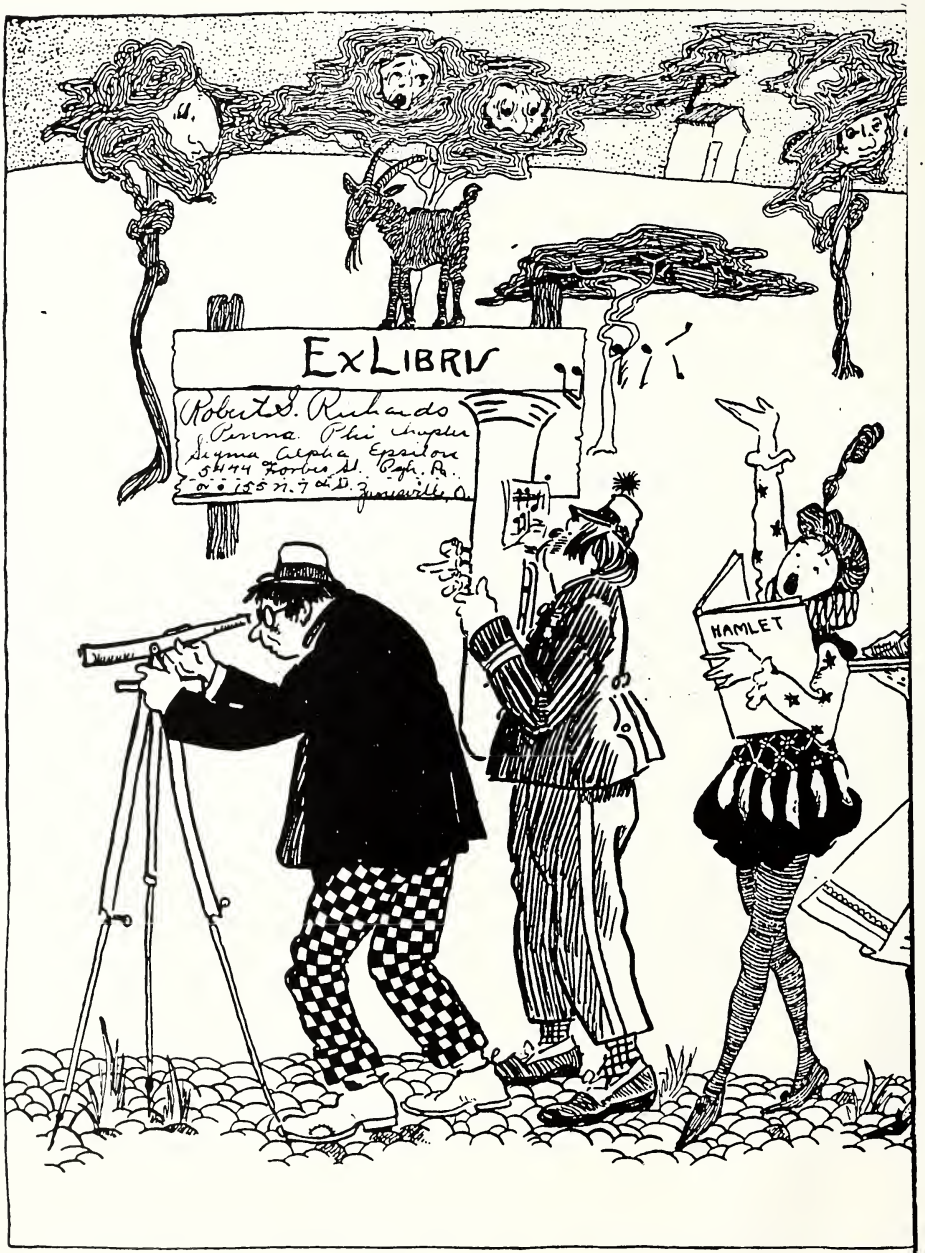
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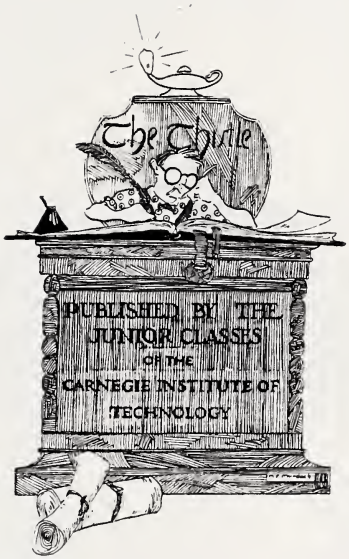
The Thistle
PUBLISHED BY THE
JUNIOR CLASSES
OF THE
CARNEGIE INSTITUTE OF
TECHNOLOGY

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FOREWORD

TO recall the life and spirit of Carnegie Tech has been the sincere purpose of the Editors of this book. If we have failed in our object, we have no apologies to make, but assure you that "we have done our best."

DEDICATED
TO THE
MEMORY
of
ANDREW CARNEGIE
MY HEART
IS IN THE WORK

Andrew Carnegie

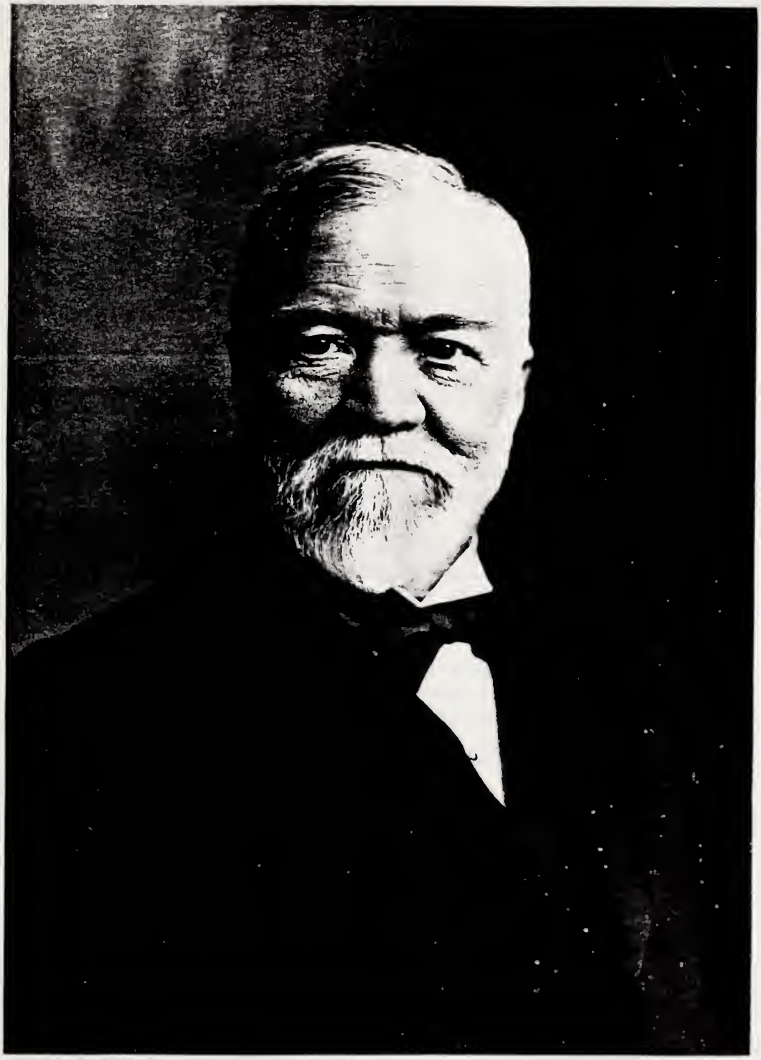
November 25, 1835 — August 11, 1919

"If you were to ask me what was the greatest thing Mr. Carnegie did (and that is pretty hard to tell), I would say that his greatest contribution to our modern day life was to inspire others to do as he did. He set an example and led others to it. He never followed. He was always a pioneer in the enterprise in which he engaged. His work was always creative and constructive. He inaugurated a new era for men having surplus wealth, and in so doing, displayed a vision far in advance of his day and age. He conscientiously, until the very end, practiced that 'gospel of wealth' which he had always preached, and lived exactly up to the maxim, 'He who dies rich, dies disgraced.' Mr. Carnegie will be universally known, appreciated and loved by his fellow-men, in generations to come, for his benevolent acts of today, which are founded and built upon the principle of humanity, 'Love of his fellow-man.'"

Charles L. Taylor,
President of the Edgar Thomson Steel Works.

"Andrew Carnegie's greatness will survive his death. His ardent spirit will live in the hearts of those who knew him. He gave to us and to our work a wealth of affection which endeared him to the faculty, students, and alumni of this institution. The world can little know or fully understand how much the life and genius of Andrew Carnegie means to the human race. His contribution cannot be measured. It transcends that of any of his contemporaries. With simplicity, courage, and faith in his fellow-man, he served the cause of enlightenment with an idealism and persistence which will make his stature grow with time."

Arthur Arton Hamerschlag.



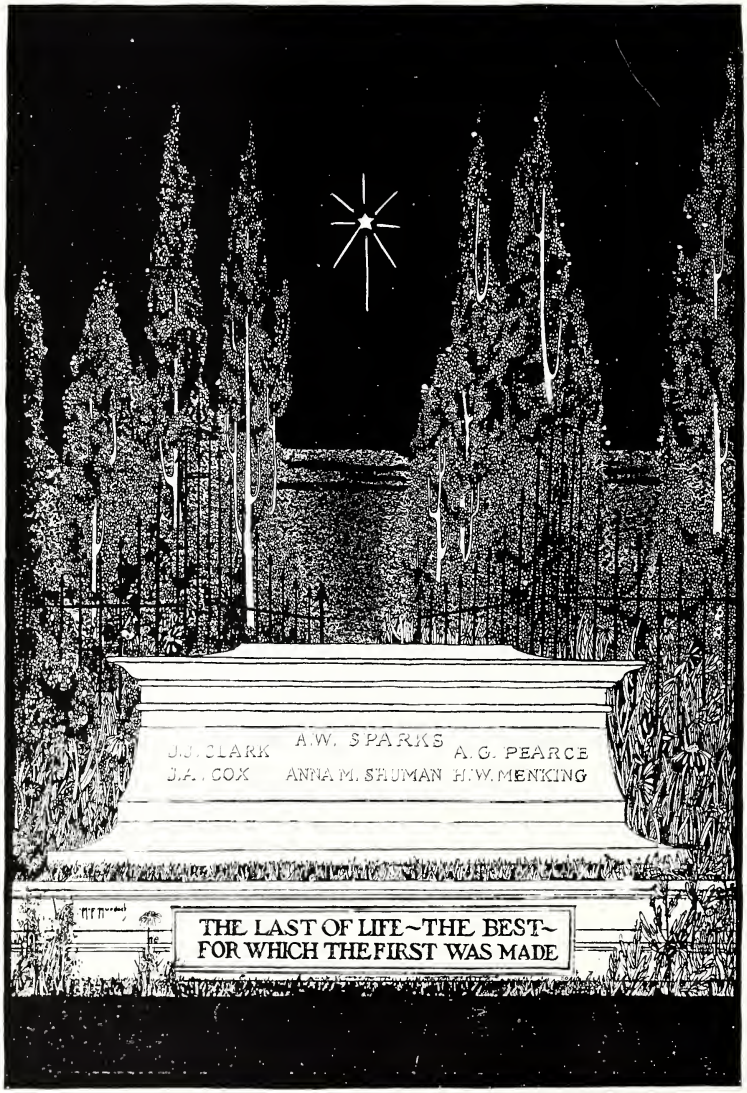
"It is nearly forty years since I first met Andrew Carnegie, my greatest friend, indeed my father. As a boy I met him while he was sojourning in the Allegheny Mountains. Even in those early days, such was his personality as to inspire one to better effort in life and to an appreciation of the finer things in the world, not so much by his words, but just by the influence of his strong personality. When I look back at my early life I now feel the influence his personality had upon me continually. Mr. Carnegie is a great example of what a strong personality will do in the world.

"I attribute the steelmaster's success to his faculty of enlisting in his service, men of ability, men who were schooled in the arts and crafts with which Mr. Carnegie himself was not extraordinarily familiar, but which were essential in the expansion of the steel industry.

"It is quite a thing to enlist such aid, but a much different thing to get the best efforts from such men, and that faculty Mr. Carnegie possessed. His great results were always obtained under a spirit of approval and never one of criticism. Mr. Carnegie displayed this philosophy of life early in his career, and he possessed this trait more strongly than any man I ever knew.

"Mr. Carnegie could have nothing better said of him than that he was truly democratic. We are all striving for that. The true aristocrat of today is not the man of birth or wealth, but he is the man who has done something for humanity. He was a true example of democracy, and that which we strive for today Mr. Carnegie practiced all his life. He numbered among his friends not only the rich and powerful, but the workingman."

CHARLES M. SCHWAB.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THE LAST OF LIFE ~ THE BEST ~
FOR WHICH THE FIRST WAS MADE

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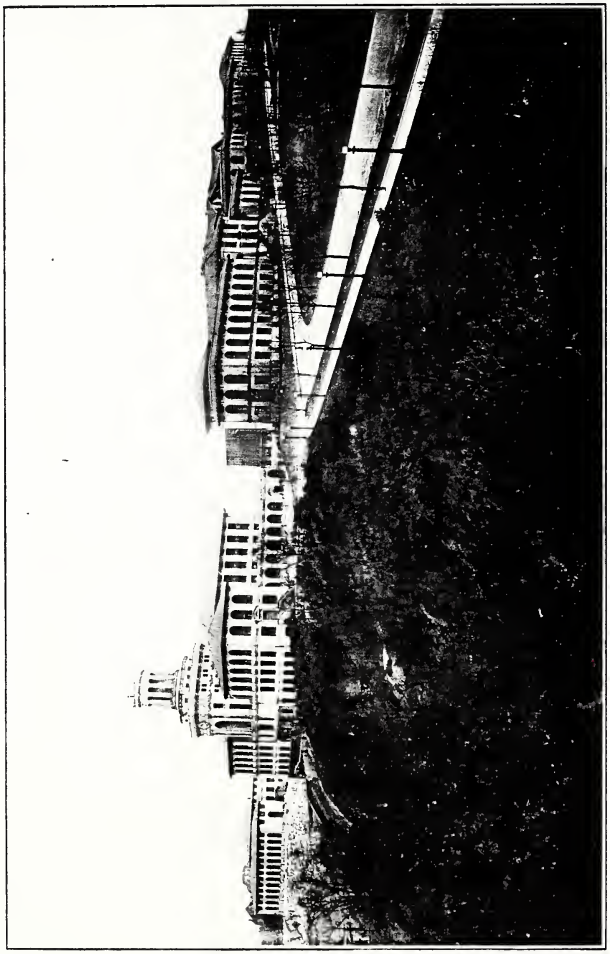

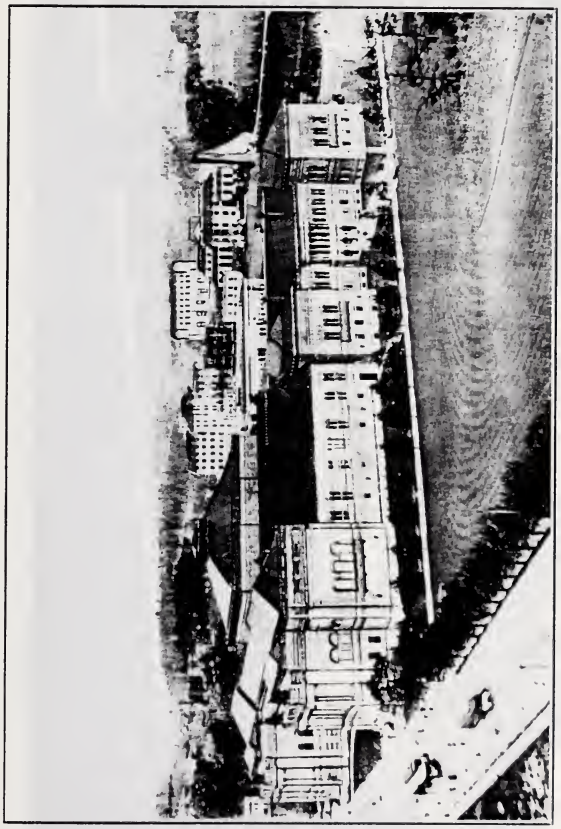

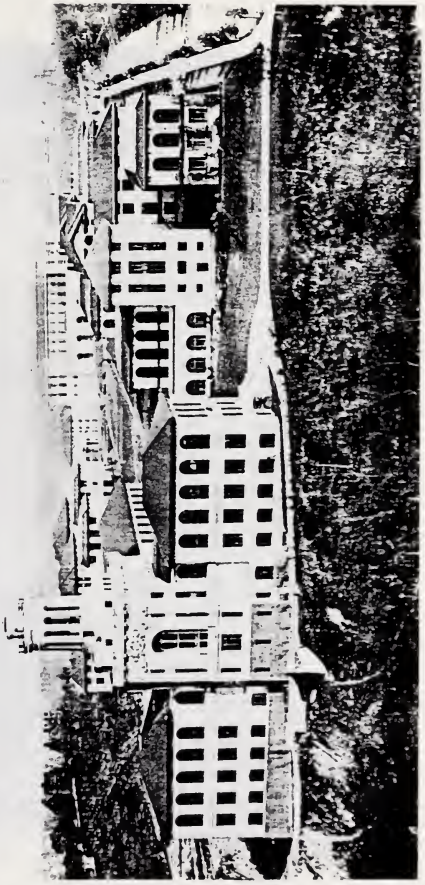

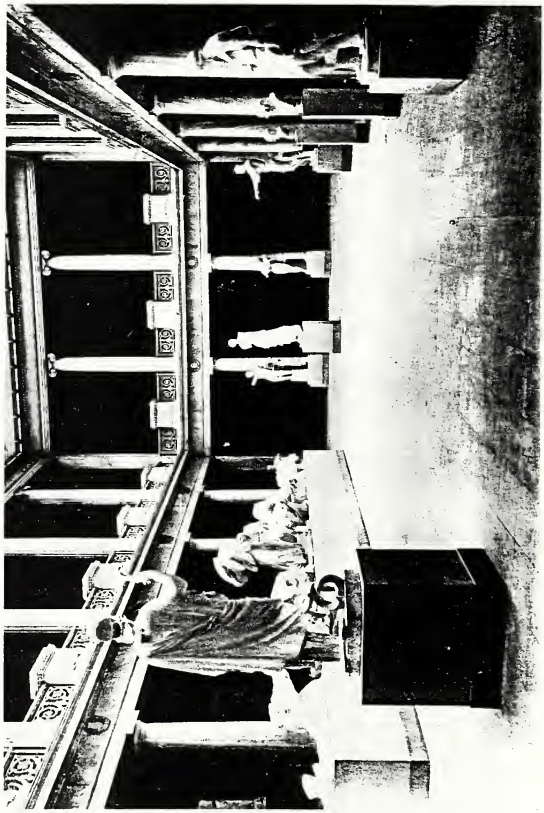

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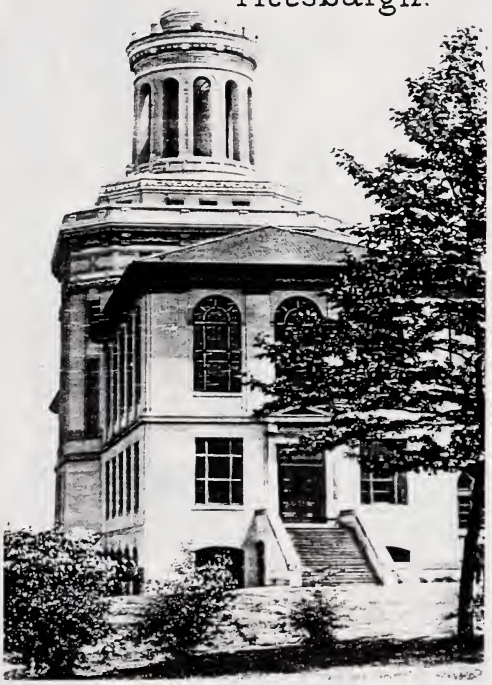

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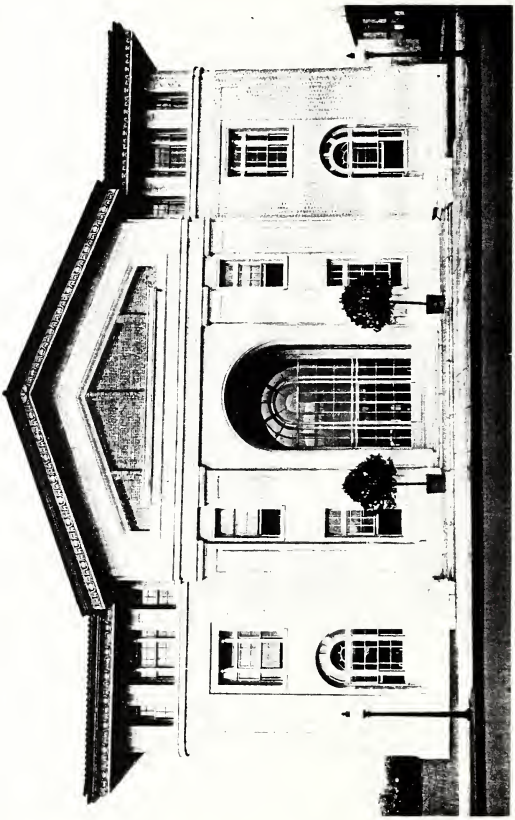

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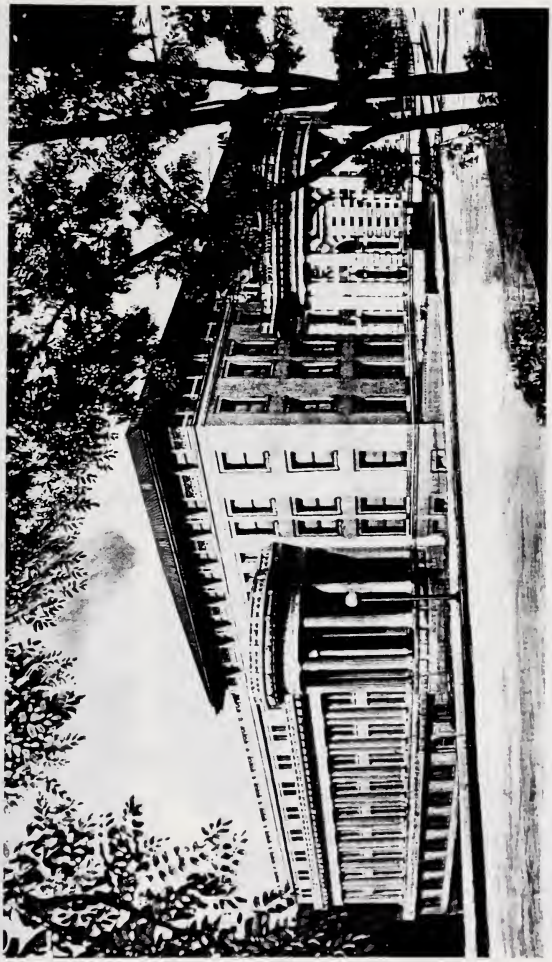

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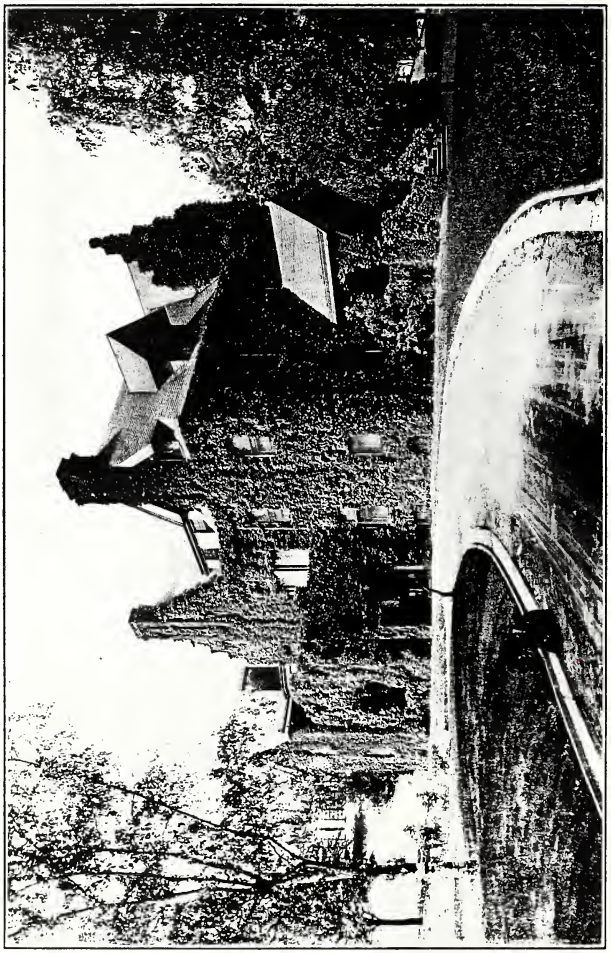

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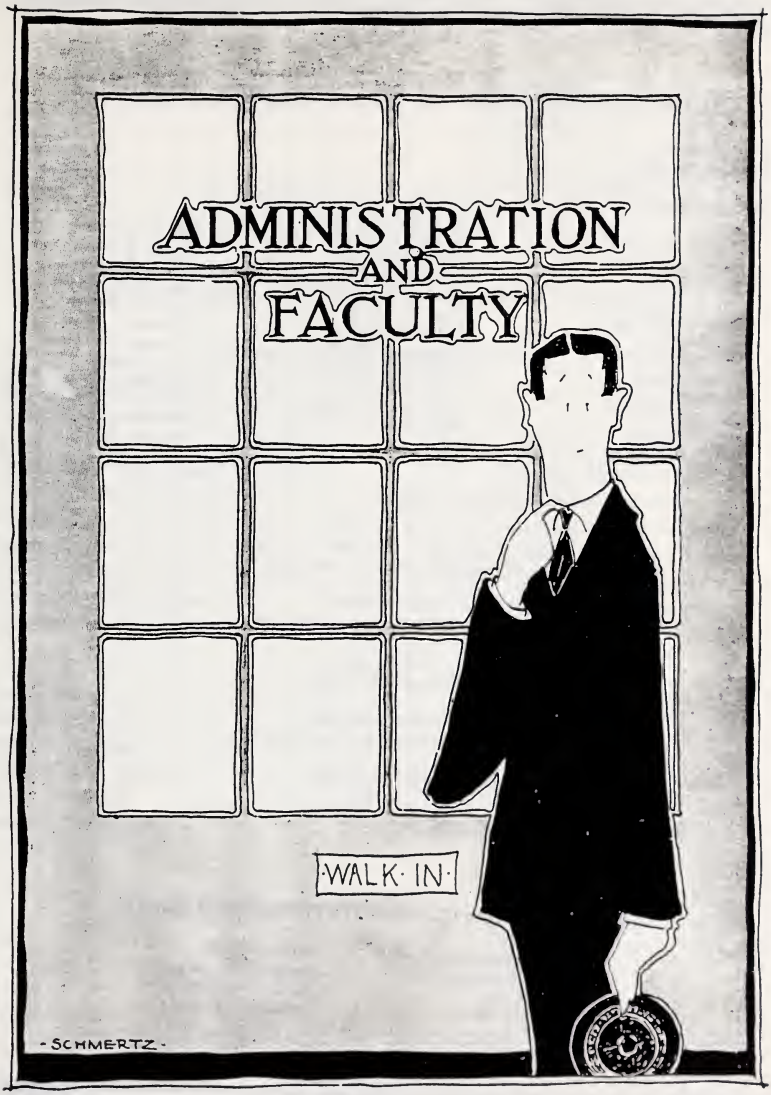
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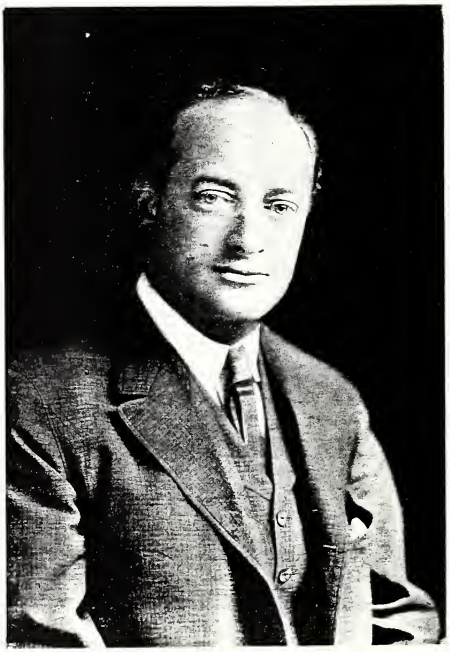

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HUBERT OSBORNE, *Assistant Professor of Dramatic Art*
Royal Military College of Canada, 1901; Queens University, 1904.

FRANCES CAMP PARRY, A.B., *Head of Department of English, Professor of English*
A.B., Smith, 1899.

HELENE MAUD POPE, A.B., A.M., *Head of Department of Household Economics, Professor of Nutrition*
A.B., Mt. Holyoke, 1904; A.M., Columbia University, 1914.

WILLIAM Z. PRICE, E.M., *Assistant Professor of Civil Engineering*
E.M., Lehigh, 1910.

WALTER KERR RAINSFORD, A.B., *Head of Department of Architecture*
A.B., Harvard, 1904; Ecole des Beaux Arts, Paris, 1912.

NORMAN COLMAN RIGGS, B.S., M.S., *Head of Department of Applied Mechanics*
B.S., University of Missouri, 1895; M.S., Harvard, 1898. Φ B K.

JAMES EDWIN RUSH, S.B., C.P.H., *Assistant Professor of Sanitary Engineering*
S.B., Massachusetts Institute of Technology, 1912; C.P.H., New York University, 1915. N Σ N.

SYLVAIN SALIERES, *Head of Department of Sculpture*
Student, Art School at Toulouse, France, Ecole des Beaux Arts; pupil of Falguieres, Paris.

EUGENE FRANCIS SAVAGE, *Professor of Decoration*
Corcoran Art Gallery; Fine Arts Academy of Chicago; American Academy in Rome.

VINCENT PETER SOLLOM, *Associate Professor of Interior Decoration and Design*
Oscott College, Warwickshire, England; Birmingham School of Art.

CLARENCE WILBUR SPROULL, B.S., M.E., *Head of Department of Drawing and Machine Design, Professor of Drawing and Machine Design*
B.S., Rose Polytechnic Institute, 1909; M.E., 1919.

CHARLES BEECHER STANTON, C.E., *Associate Professor of Railroad Engineering and Surveying*
C.E., Rensselaer Polytechnic Institute, 1903. Δ K E, Θ N E, B Δ B.

EDWARD STEIDLE, B.S., E.M., *Associate Professor of Mining Engineering*
B.S., Pennsylvania State College, 1911; E.M., 1914. Φ Δ Θ.

KARL KRENKELL STEVENS, B.S., *Assistant Professor of Analytical Chemistry*
B.S., University of Michigan, 1898.

THOMAS WOOD STEVENS, *Head of Department of Dramatic Arts*
Armour Institute of Technology; Chicago Art Institute, 1903; pupil of Brangwyn and Sorolla.

JOHN ALFORD STEVENSON, A.B., A.M., Ph.D., *Head of Department of Life Insurance Salesmanship, Professor of Education*
A.B., Ewing College, 1908; A.M., University of Wisconsin, 1912; Ph. D., University of Illinois, 1918. Σ N, Φ Δ K, K Δ II, Φ H.

EDWARD KELLOGG STRONG, JR., B.S., M.S., Ph.D., *Head of Department of Vocational Education, Professor of Vocational Education*
B.S., University of California, 1906; M.S., Columbia University, 1909; Ph.D., 1911. Φ Σ K.

HAAKON STYRI, M.E., Ch.E., *Assistant Professor of Metallurgy and Mining*
M.E., Kristiania Technical School, 1907; Ch.E., Carnegie Institute of Technology, 1910.

Charles Jay Taylor, LL.B., A.M., *Professor of Illustrations*
LL.B., Columbia University, 1874; A. M., Middlebury College, 1910; pupil of Emanual Lentze and Eastman Johnson.

Horace Richmond Thayer, S.B., M.S., *Associate Professor of Structural Design*
S.B., Massachusetts Institute of Technology 1898, M.S., Lehigh University, 1906.

Louis Leon Thurstone, M.E., Ph.D., *Head of Department of Psychology*
M.E., Cornell, 1912; Ph.D., University of Chicago, 1917. Acacia, H K N.

Charles Leopold Willibald Trinks, M.E., *Head of Department of Mechanical Engineering, Professor of Mechanical Engineering*
M.E., Charlottenburg, 1897. T B Π.

Francis J. Tschan, B.A., M.A., Ph.D., *Assistant Professor of History*
B.A., Loyola College, 1901; M.A., 1903; Ph.D., University of Chicago, 1916.

Elizabeth Moorhead Vermorcken, *Assistant Professor of English Literature*

Robert Zerubbabel Virgin, *Assistant Professor of Coal Mining*

Chester Marvin Wallace, A.B., *Assistant Professor of Dramatic Art*
A.B., Western Reserve University, 1905.

Charles Watkins, B.A., M.S., Ph.D., *Professor of Chemistry*
B.A., Washington and Lee University, 1909; M.S., Vanderbilt University, 1911; Ph.D., Johns Hopkins, 1915. B Θ Π, Φ B K, Γ A.

Ethel G. Webb, B.S., *Assistant Professor of Costume Design*
B.S., Columbia University, 1915. Π B Φ.

William Roth Work, A.B., M.E. in E.E., *Associate Professor of Electrical Engineering*
A. B., Wittenberg College, 1902; M.E. in E.E., Ohio State University, 1905. B Θ Π, Σ Ξ.

Alexander Jay Wurts, Ph.B., M.E., *Head of Department of Electrical Engineering, Professor of Electrical Engineering*
Ph.B., Yale, 1883; M.E., Stevens Institute of Technology, 1884. Θ Ξ.

Clarence Stone Yoakum, B.S., A.B., Ph.D., *Director of Bureau of Personnel Research*
B.S., Campbell, 1900; A.B., Ibid, 1901; Ph.D., University of Chicago, 1908. Φ Γ Δ, Γ A, Σ Ξ.

ROY BARTON AMBROSE, B.S., *Head Instructor in Power Machinery Operation*
B.S., Armour Institute of Technology, 1911.

FRANCIS GILMAN AHLERS, A.B., *Assistant in English*
A.B., Harvard College, 1919.

MYRON F. BARRETT, B.S., *Instructor in Vocational Education*
B.S., Carnegie Institute of Technology, 1919. A T.

OLIVE BARROWS, B.S., *Instructor in Household Economics*
B.S., Simmons College, 1918.

CLIFFORD ADAMS BAYARD, A.B., *Instructor in Drawing, Design and Lettering*
A.B., Carnegie Institute of Technology, 1917.

CARL W. BETZ, B.S., *Instructor in Chemistry*
B.S., University of Missouri, 1917. A X Σ.

MARION A. BILLS, B.A., Ph.D., *Research Assistant, Bureau of Personnel*
B.A., University of Michigan, 1908; Ph. D., Bryn Mawr College, 1917.

JOHN BLACKHALL, *Instructor in Forge Practice*

ESTHER LOUISE BLAIR, M.D., *Lecturer in Hygiene*
M.D., Women's Medical College, 1890.

ALLEN HOLT BLAISDELL, B.S., *Instructor in Mechanical Engineering*
B.S., University of Maine, 1911. Φ B K, T B Π.

RALPH WALDO BOLTON, B.S., *Instructor in Mechanical Engineering*
B.S., University of Illinois, 1918. H K N.

WITT BOWDEN, A.B., Ph.D., *Instructor in History*
AB., University of Colorado, 1914; Ph.D., University of Pennsylvania, 1919.

VERNON MARSH BROWN, A.B., *Instructor in Mathematics*
A.B., Colgate University, 1915. Φ Δ Θ.

Agnes Mary Hadden Byrnes, A.B., A.M., *Instructor in Social Work*
A.B., Northwestern University, 1915; A.M., Columbia University, 1916. Φ B K.

Edward Byron, M.E., *Instructor in Physics*
M.E., Stevens Institute of Technology, 1912.

Ella Hazel Clark, A.B., M.A., *Instructor in Chemistry*
A.B., University of Illinois, 1909; M.A., Columbia University, 1911.

Clifford C. Clarke, B.S., *Instructor in Chemistry*
B.S., Colgate University, 1919. A T Ω.

Charles Albert Colmery, B.S., *Instructor in Mathematics*
B.S., Carnegie Institute of Technology, 1908. Σ N.

Mary Jane Rutherford Condon, A.B., *Instructor in Social Work*
A.B., Beaver College, 1908.

Sherman Conrad, A.B., *Lecturer in Social Work*
A.B., Colgate University, 1912. A T Ω, Φ B K, Δ Σ P.

Helen Davis, B.A., *Research Assistant in Educational Research*
B.A., University of Illnois, 1918. Φ B K, K Δ Π.

Joseph Charles Derdeyn, *Instructor in Violincello*
Royal Musical Conservatory of Belgium, 1907.

James Stevenson Dodds, *Instructor in Electric Equipment and Construction*
Bliss Electrical School, 1902.

Philip Stone Donnell, A.B., M.E.E., *Instructor in Electrical Engineering*
A.B., Clark College, 1910; M.E.E., Harvard Graduate School of Applied Science, 1915.

William Herman Dosey, *Head Instructor in Foundry*

Lemuel Harper Dougherty, C.E., *Instructor in Mathematics*
C.E., University of Pennsylvania, 1902.

Elmira May Dunlevy, A.B., *Reader in English*
A.B., Mount Holyoke College, 1916.

Elizabeth Dyer, A.B., M.A., *Instructor in Merchandise Salesmanship*
A.B., Vassar College, 1912; M.A., Simmons College, 1914.

Paul Burns Eaton, M.E., *Instructor in Drawing and Machine Design*
M.E., Cornell, 1911.

Jedediah Howard Edgerton, A.B., *Instructor in English*
A.B., Hamilton College, 1906. Θ Δ X.

HONORA ENGLISH, B.S., *Instructor in Household Economics*
B.S., University of Wisconsin, 1916.

HAROLD GERSHOM FILES, A.B., A.M., *Instructor in English*
A.B., Harvard, 1915; A.M., 1916. Φ B K.

LULU CHARLOTTE FULLER, B.S., *Instructor in Household Economics*
B.S., Carnegie Institute of Technology, 1918.

HARRY ROBERTS GRAHAM, *Instructor in Heating, Ventilating and Sanitation*

D. WALTER GRIFFITHS, Ph.B., LL.B., *Instructor in Mathematics*
Ph.B., Lafayette College, 1907; LL.B., New York Law School, 1910.

GEORGE FREDERICK GUNDELFINGER, Ph.B., Ph.D., *Instructor in Mathematics*
Ph.B., Yale, 1906; Ph.D., 1909. Σ Ξ.

JOHN WARREN GUSTAVESON, B.S., *Instructor in Physics*
B.S., Massachusetts Institute of Technology, 1918.

SAMUEL G. HAAS, B.S., *Instructor in Machine Design*
B.S., Carnegie Institute of Technology, 1917. Τ Γ Φ.

HERMAN C. HANGEN, A.B., *Instructor in Psychology and Assistant to Director of the Division of Applied Psychology*
A.B., University of Kansas, 1919. Acacia, Σ Δ X, Δ Σ P, Φ A T.

WILLIAM BEELER HARTMAN, *Instructor in Machine Work*

RUDOLPH LEONARD HASCHE, B.S., M.S., *Instructor in Chemistry*
B.S., Tarkio College, 1918; M.S., Washington and Jefferson, 1919.

BEATRICE E. HEINRICH, B.A., *Reader in History*
B.A., Carnegie Institute of Technology, 1918.

PETER WOOD HEPBURN, *Instructor in Machine Shop Practice*

ERLE GLADSTONE HILL, B.S., *Instructor in Metallurgy and Mining*
B.S., University of California, 1913.

MYRA ELIZABETH HILLS, A.B., A.M., Ph.D., *Instructor in Psychology and Education*
A.B., Western Reserve University, 1912; A.M., 1915; Ph.D., Columbia University, 1919. Δ Φ Ψ, Φ B K.

NEUMAN L. HOOPINGARNER, A.B., A.M., *Field Representative, Bureau of Personnel Research*
A.B., University of Texas, 1913; A.M., 1915. Φ Δ K.

AUGUST JOHN WALTER HORST, A.B., M.A., *Instructor in Modern Languages*
A.B., Adelbert College, 1907; M. A., Harvard University, 1909. Φ B K.

Callie Hunter, B.S., *Assistant Instructor in Biology*
B.S., Carnegie Institute of Technology, 1918.

Alice Emma Hyde, *Instructor in Costume Economics*
Drexel Institute, 1906.

William Herbert Ingram, B.S., M.S., M.D., *Lecturer on Anatomy*
B.S., Geneva College, 1890; M.S., 1893; M.D., University of Pittsburgh, 1894.

Vern James, A.B., A.M., *Instructor in Mathematics*
A.B., Indiana University, 1912; A.M., Columbia University, 1916.

Selmar Janson, *Instructor in Piano*
Graduate Berliner Conservatory, Berlin, Germany.

Francis Oscar Johanson, B.S., *Instructor in Mathematics*
B.S., Columbia University, 1916.

William Frederic Kamman, A.B., A.M., Ph.D., *Instructor in Modern Languages*
A.B., Indiana University, 1913; A.M., 1914; Ph.D., University of Pennsylvania, 1917.

Marion Ruth Keefer, B.S., *Instructor in Household Economics*
B.S., Carnegie Institute of Technology, 1919.

Byron L. Keim, B.S., *Instructor in Mechanical Drawing and Descriptive Geometry*
B.S., Carnegie Institute of Technology, 1918.

Elizabeth Gamble Kelly, B.S., *Instructor in Costume Economics*
B.S., Carnegie Institute of Technology, 1913.

Thomas Ernest Kennedy, A.B., *Instructor in English*
A.B., Wheaton College, 1912.

Louisa Wilson Knox, A.B., *Instructor in Modern Languages*
A.B., Goucher College, 1895. Δ Γ.

Casper Petrus Koch, *Instructor in Organ*
Pupil of Reimann and Kullak, Berlin, Germany.

Charles Wesley Larkin, *Instructor in Masonry*
Williamson Trade School, 1913.

Leo Thomas Lawler, A.B., A.M., LL.B., *Instructor in English*
A.B., Georgetown University, 1914; A. M., 1915; LL.B., 1917. Φ Α Δ.

Amy Leonard, B.S., *Instructor in Secretarial Studies*
B.S., Simmons College, 1914.

Anna Christine McBride, A.B., B.S., A.M., *Instructor in Social Work*
A.B., University of Missouri, 1912; B.S., 1912; A.M., 1913. Φ Β Κ, Σ Ξ.

PAUL MCCORKLE, B.A., *Instructor in Physics*
B.A., Ohio State University, 1914. Π K A, Φ B K.

JOHN PAUL MANNING, *Instructor in Pattern Making*
Carnegie Institute of Technology, 1909.

WILLIAM LEROY MARKS, M.D., *Lecturer in Hygiene and Resident Physician*
M.D., University of Pennsylvania, 1911. Φ A Σ, Opheleum.

JOHN C. MARTIN, *Instructor in Machine Composition*
Northumberland School, 1895.

MYRTLE ELVENA MERITT, B.S., *Instructor in Ceramics*
B.S., Alfred University, 1913; New York State Ceramic School, 1914.

ROBERT JOHN MILLAR, *Instructor in Architectural Drawing*

LAWRENCE HOWLETT MILLER, B.S., *Instructor in Chemistry*
B.S., Colgate University, 1918. A T Ω.

CLARA K. NELSON, *Instructor in Design*
Rhode Island School of Design, 1914.

MARION LELA NORRIS, A.B., A.M., *Instructor in Research Bureau for Retail Training*
A.B., Northwestern University, 1910; A.M., 1915.

JAY LESLIE O'HARA, A.B., *Instructor in Economics*
A.B., University of Michigan, 1915.

MARY ISABEL PATTEN, A. B., *Instructor in Physical Education*
A.B., Smith, 1911.

MILAN PETROVITZ, *Instructor in Still Life Painting*
Carnegie Institute of Technology, 1917.

WILLIAM PFOUTS, *Head Instructor in Pattern Making*

GEORGE MCCANDLESS PORTER, B.S., *Instructor in Electrical Engineering*
B.S., Carnegie Institute of Technology, 1911.

HOWARD GARRETT POTTER, *Head Instructor in Machine Shop Practice*

DAVID B. PUGH, B.S., *Instructor in Physics*
B.S., Lebanon Valley, 1916.

CLARENCE EARL POWELL, B.S., *Instructor in Mechanical Drawing and Machine Design*
B.S., Carnegie Institute of Technology, 1919. Σ A E.

CHARLES WILSON PRINE, B.S., M.S., *Instructor in Physics*
B.S., Denison University, 1915; M.S., University of Wisconsin, 1917.

WILFRED ALLEN READIO, A.B., *Instructor in Drawing and Composition*
A.B., Carnegie Institute of Technology, 1918.

EARL FREDERICK REED, A.B., *Instructor in Commercial Law*
A.B., Washington and Jefferson College, 1915. Δ Θ Φ, Λ X A, Δ Σ P.

THEODORE RENTZ, *Instructor in Violin*
Graduate Royal Conservatory of Music, Sondershausen, Germany.

HAROLD ANDREW RICHMOND, A.B., M.A., *Research Assistant in Bureau of Personnel Research.*
A.B., Wesleyan, 1915; M.A., 1916. A X P, Φ B K, Δ Σ P.

ELIZABETH JEANNETTE ROENIGK, A.B., *Instructor in English*
A.B., Vassar, 1914.

GRACE MARGARET RUPERT, B.S., *Instructor in Chemistry*
B.S., Carnegie Institute of Technology, 1918.

WILLIAM A. RUSH, B.S., *Instructor in Physics*
B.S., Purdue University, 1906. T B Π.

HENRY KLOMAN SCHMIDT, *Instructor in Piano*
Duquesne University, 1898; Royal Conservatory Leipsic, 1901.

FRANKLIN ALLEN SIMMONS, B.S., *Instructor in Civil Engineering*
B.S., Worcester Polytechnic Institute, 1913. T B Π.

WILLIAM RANDALL SKILLEN, *Instructor in Department Store Organization*

EDWIN HORACE SMITH, *Head Instructor in Wood Working*
K Σ P.

G. CARLTON SMITH, B.S., *Instructor in Chemistry*
B.S., Carnegie Institute of Technology, 1915. Σ A E.

CRAIG RENO SPICHER, *Instructor in Presswork, Acting Head of Dept. of Printing*
Williamsport Commercial College, 1902; I.P.P., Technical School, 1915.

IDA HOMER SPURRIER, *Instructor in Physical Education*
Boston School of Physical Education, 1918.

EDGAR MELVILLE STARR, A.B., *Instructor in Mathematics*
A.B., Indiana University, 1919. Δ Υ.

TILLY EMILY SVENSON, B.S., *Instructor in Secretarial Studies*
B.S., Simmons College, 1919.

JOHN STANLEY TAYLOR, *Head Instructor in Forge Practice and Heat Treatment of Steel*

L. C. Tomlinson, E.E., M.S., *Instructor in Electric Equipment and Construction*
E.E., University of Minnesota, 1904; M.S., 1909. Σ Ξ.

Esther Topp, A.B., *Instructor in Drawing and Water Color*
A.B., Carnegie Institute of Technology, 1916.

Morris R. Trexler, A.B., A.M., *Instructor in Accounting*
A.B., Lafayette College, 1898; A.M., 1901.

Walter Hanrichs Renner Trumbauer, B.S., A.M., Ph.D., *Instructor in English*
B.S., University of Pennsylvania, 1912; A.M., 1913; Ph.D., 1917. Φ B K.

Lawrence Charles Turnock, B.S., Ch.E., *Instructor in Physical and Electrochemistry*
B.S., University of Illinois, 1910; Ch.E., University of Wisconsin, 1911. Z Ψ.

Helen Glenn Tyson, A.B., *Instructor in Social Work*
A.B., Vassar College, 1907. Φ B K.

Jacob David Utech, *Instructor in Foundry*

Howard Albert Vierheller, B.S., *Instructor in Machine Design*
B.S., Carnegie Institute of Technology, 1916. Θ Ξ.

Sarah Jane Weber, B.Pd., B.S., *Instructor in Household Economics*
B.Pd., Missouri State Normal, 1911; B.S., Columbia University, 1917.

Augustine Henry Weitz, B.S., *Instructor in Chemistry*
B.S., Carnegie Institute of Technology, 1915.

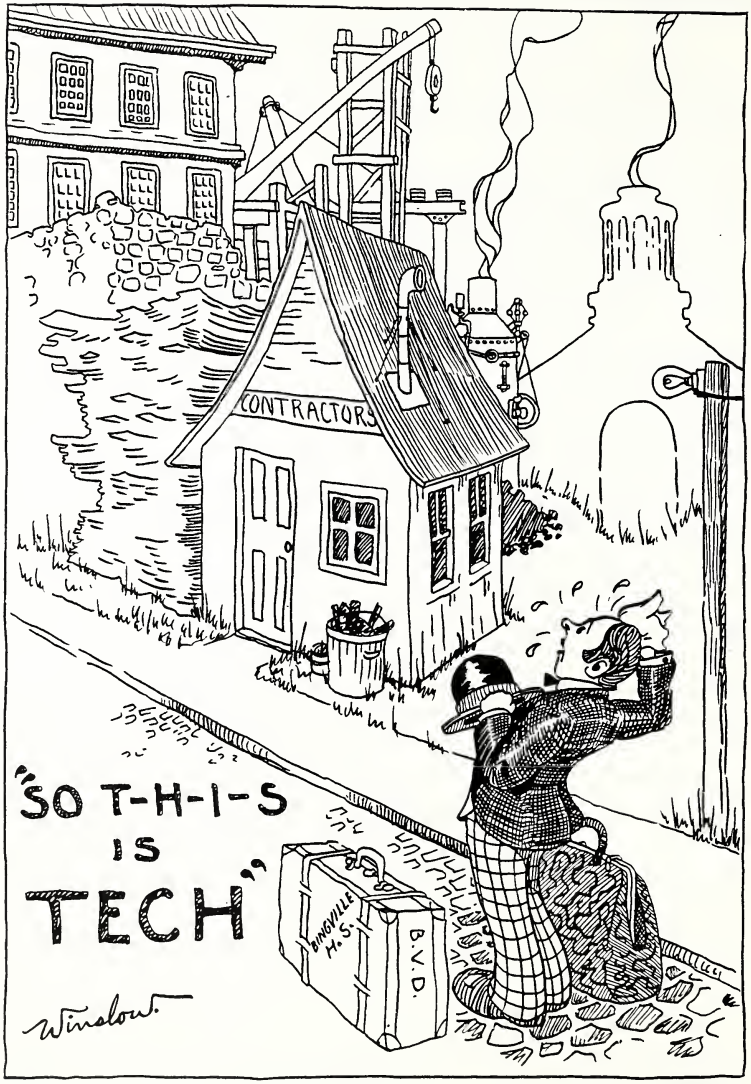
Joseph Yendes Wheatley, B.S., *Instructor in Descriptive Geometry*
B.S., Columbia University, 1886. X Ψ.

Gertrude Marean White, B.A., M.A., Ph.D., *Instructor in Biology*
B.A., Downer College, 1913; M.A., University of Wisconsin, 1914; Ph.D., 1918. Σ Ξ.

Edwin A. Whitman, A.B., M.A., *Instructor in Mathematics*
A.B., Yale University, 1910; M.A., University of Pittsburgh, 1915. Φ B K. Σ Ξ, Φ Δ K.

Edith May Winchester, B.S., *Instructor in Secretarial Studies*
B.S., Simmons College, 1919.

William Burton Yates, M.E., *Instructor in Mechanical Drawing*
M.E., School of Science and Art, London, England, 1871.


CONTRACTORS
"SO T-H-I-S
IS
TECH"
Winslow
BINGVILLE
H. S.
B.V.D.

SENIORS

Senior Class Officers—M.M.D.

Agnes Piper	*President*
Mildred Krummell . . .	*Vice-President*
Nell Brey	*Secretary*
Mary Cummings	*Treasurer*

AGNES PIPER, "Natalie", Age. 23.
Costume Economics
Pittsburgh, Pa. Allegheny High School

Athletic Association (1, 2, 3, 4); Guild (1, 2, 3, 4); Y. W. C. A. (3, 4); Y. W. C. A. Cabinet (4); Student Council (4); Class President (4).

Always cheerful and willing to do,
She has brown curly hair and true eyes of blue.
This versatile maid arose to the height;
In choosing our president, we surely chose right.

MILDRED B. KRUMMELL, "Krum", Age. 20.
Household Economics
Pittsburgh, Pa. Fifth Avenue High School

Athletic Association (1, 2, 3, 4); Hockey Team (2); Guild (1, 2, 3, 4); Vice-President Class (4).

Calm, sweet dispositioned, never enraged,
Probably that's the secret of being engaged.
In all our classes, Mildred's our star,
She has ever been away above par,
Looking into her future we clearly discern,
"Success" is most certain at every turn.

NELLE BREY, Age 22. *Household Economics*
Uniontown, Pa. Uniontown High School

Athletic Association (1, 2, 3, 4); Basketball Team (2, 3); Volley Ball (4); Hockey (2); Guild (1, 2, 3, 4); Y. W. C. A. (3); Class Secretary (4).

Motto: "Eat and Grow Thin". But how can she do this when she is Skibo's chief cheese-sandwich patron? She was a man-hater before the days of football, but even so she is a "Pi-Jilt".

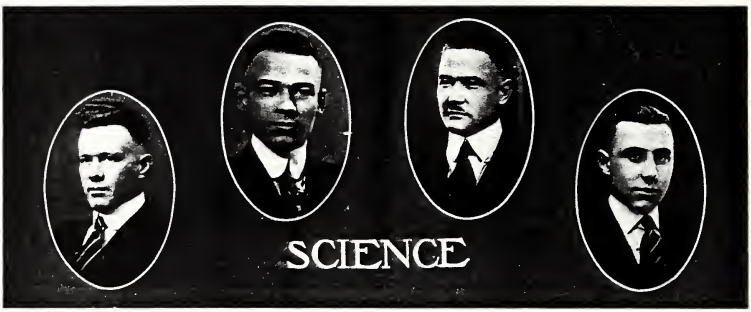
MARY E. CUMMINGS, "Cummie", Age. 21.
Costume Economics
Pittsburgh, Pa. New Cumberland High School

Athletic Association (1, 2, 3, 4); Guild (1, 2, 3, 4); House Committee Fifth Avenue Hall (2); Y. W. C. A. (4); Junior Prom Committee (3); Class Treasurer (4).

"Cummie" is an all-around good sport. For further particulars ask "Joe"—he knows.

Senior Class History—M. M. D.

VOLTAIRE says that history is little else than a picture of human crimes and misfortunes. How far this applies to the history of the Senior Class, I will leave it to you to judge. We have had our misfortunes— examinations and barefoot dancing. We have committed our crimes—hazing for one thing. But then we, as Plebes, voluntarily accepted hazing, so we had no regrets or mercy. You can ask the Class of 1921. Against these lurid spots upon the history of 1920, stand out some things that are bright and colorful. It was we who, in our Plebe Year, touched Athletics on the shoulder, saying "You're it"—and set her going. It was we who, in our Sophomore Year, established daffodil day as a regular holiday at Margaret Morrison for remembering the orphans of France. And it was we who, in our Junior Year, had the greatest Prom known to the civilized world. It is plain to see that the history of the Senior Class is above the history of nations!



Senior Class Officers—Science

J. D. BEATTY . . . . . *President*
F. J. HEINLE . . . . . *Vice-President*
W. K. FAWCETT . . . . . *Secretary*
E. G. STOY . . . . . *Treasurer*

JOHN DAVID BEATTY, AGE, 23.
Civil Engineering
PITTSBURGH, PA. Stetson Academy, Florida

Θ Ξ; *Dragon; Delta Skull; Lawtochfrarie; Tennis (1, 2, 3, 4); Captain (3); Senior Civil Basketball; President Junior Class; Vice-President Student Senate (Science) (3); President Senior Class; President Civil Engineers' Society; Chairman Club Room Committee (4).*

"Jack" is rather musically inclined and is invariably singing comic ditties for the benefit of the boys. His favorite is Kipling's "To the Ladies". "Jack" is a real lover of the fair sex. He does not care much for studying, but is quite a shark on the tennis court.

FREDERICK JOHN HEINLE. AGE, 22.
Chemical Engineering
ZANESVILLE, OHIO Zanesville High School

Σ A E; *Class Vice-President (4); Musical Club (1, 3, 4); Chemists' Club (2), Secretary (3). President (4); Buckeye State Club (3), Vice-President (3, 4).*

"Fritz", "Our blushing beauty" and "Wiolinist" from Zanesville. He not only carries matches and stays out till nine o'clock, but also has been seen smoking a "Milo" in his room. The P. C. W. and "Holy City" both have attractions (?) for "Fritz".

WILLIAM KENNETH FAWCETT. AGE, 24.
Commercial Engineering
ERIE, PA. Erie High School

Σ A E; *Class Secretary (3, 4); Musical Clubs (3, 4); Athletic Editor "Thistle" (3); Fulcrum Club (2); Commercial Club (3, 4); Quaker (4); Wobblers.*

"Fat" was one of the original "woman avoiders", but he grew a mustache. and fell, and oh! how he did hit. His favorite expression is "pipe down", and he tries to convey the impression that he is hard.

EDWARD GUTHRIE STOY, AGE, 21.
Mechanical Engineering
PITTSBURGH, PA. Fifth Avenue High School

Θ Ξ; *Lawtochfrarie; Delta Skull;* T B Π; *Dragon; Musical Clubs (1); Plebe Banquet Committee; Class Treasurer (4); "Thistle" Board (2); Interfraternity Council; Mystic Seven.*

One can always tell when Eddie is around, by looking for the ever-present brief-case. What has us all worried is, how he made Tau Beta Pi after taking three re-exams. One thing is certain, and that is, Eddie made a good dry land sailor.

Senior Class History—Science

THE Class of 1920 came in as a gentle, innocent lamb. This lamb was made the butt of many a harmless joke during the first few days of school. Later in the year, some of its fleecy wool was sheared and dyed by the Sophomores. The biggest event of our Plebe Year was our banquet. It proved a big success in spite of the Sophomores. We finished this strenuous year with just about half of our original numbers.

During our Sophomore Year our ranks were still further reduced by the men going into Service. This year was rather dull and inactive in class affairs, due to the unrest and strain of war conditions. However, we did have a real good Soph Hop. School was closed early in order that special War Courses might be given.

The beginning of our Junior Year was delayed by the war until January 1, 1919, when the remnant of our class again assembled under the old classification, with the old-time pep. Of course, the big event of the year was the Prom. There are proms and proms, but after the war this one seemed different.

Anticipation surely is greater than realization. When Plebes we envied the Seniors, but now as Seniors we find the faculty still have us worried. The feature event of our Senior Year was the Quaker Dance. Now this class that entered as a gentle lamb has gained worldly knowledge and is ready to go out and get the World's goat. Watch Us!

Senior Class Officers—Arts

Arleigh Williamson	*President*
S. P. Stewart	*Vice-President*
Jeannette Shirk	*Secretary*
J. P. Davis	*Treasurer*

ARLEIGH B. WILLIAMSON, Age. 30. *Dramatic Arts*

Sacramento, Cal. Sacramento High School

Σ P; *President Student Body, School of Applied Design, 1916-1917; President Senior Class; Director "Fall Festival", 1919; Member Students' Council, 1916, 1917.*

Never failed us yet; always ready for anything—even "Sam McGee". The best ever.

STANLEY POTTER STEWART, Age, 28. *Architecture*

Hamilton, Ohio North High School. Columbus, Ohio

Σ N; *Dragon; Musical Clubs (1, 4); President of Class (1). Vice-President Class (4); Vice-President Design School Senate (4); Senior Reception Committee (4); Assistant Business Manager "Bohemia Unlimited" (4); Design Ball Committee (4).*

'Way, 'way back in the ages dark, there came to this institution a young man endowed with many talents. Now, after many years of constant application, he's known to us as "Pop", but we will all admit that they don't make them any better. As a true Tech man, and a man among men, "Pop" will be remembered by us all.

JEANNETTE CAMPBELL SHIRK. Age. 22. *Illustration*

Pittsburgh, Pa. Peabody High School

Art Editor of "Thistle" (3); Secretary Senior Class.

She giggles, giggles;
She stipples, stipples,
And verses—free and cleverly;
And fudges—very creamily,
And leads a triple life.

JOHN PHILLIPS DAVIS. Age, 25. *Architecture*

Pittsburgh, Pa. Central High School

Ξ Σ T; *Dragon; Tennis (1, 2, 3), Captain (2, 3); Hockey (2); Student Activities Board (4); Treasurer Senior Class (4); Assistant Editar Tartan (3); Choirman Senior Reception Committee; Design Ball Committee (4).*

Another milestone in the History of Carnegie Tech—Selah! Who made the smock for you, Toots? And when a man goes to McCreary's for lunch, we know there are women—whimsical or no—and Toots and his hearty laugh are known by everyone on the campus—both sex. But aside from these activities, he is a star performer on the tennis court, captaining the tennis teams of '16 and '17.

Senior Class History—Arts

FROM that day in 1916, when we stumbled down the circuitous steps of the Administration Building, clutching a small, square card of delicate pink and a little pamphlet of Instructions, we became the Class of 1920 —School of Applied Design. Hard-working Plebes we were, too, knocking off only for the Dean's Reception and an occasional dance thereafter.

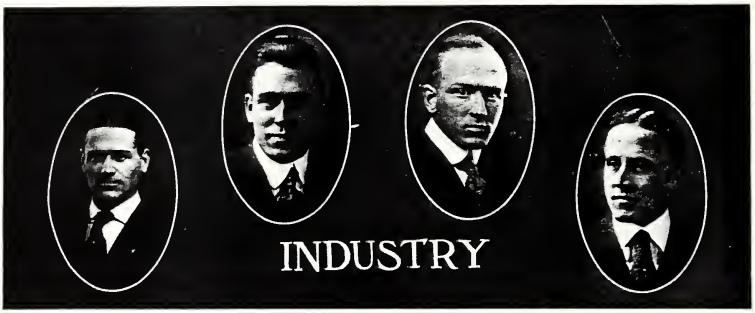
Our second year was concerned chiefly with the Military; our dances and parties were invaded. War scattered us; war roused us to service; war claimed many of those we loved, without the flash of a last look, the faltering of a hand, the word of parting. The scourge of an epidemic fell upon us sorely.

Back in the halls of our marble workshop, we witnessed new things. A year, two years, had dropped out of our lives. A kaleidoscopic shaking had revealed a new class—a class of many classes, 1918, '19, '20—a new class with a paltry score or more of hard-working creatures. We were almost lost in the maze of under-classmen, and bewildered by our old 1916 friends appearing in the years of '21 and '22. We felt strange and unacquainted. Plebes were no longer Plebes; our building was no longer the School of Applied Design. Old things had passed away and new things came to take their places.

Were we discouraged? We refused to admit it.

By a reception and dance, reminiscent of those "good old days", we made our existence a thing not to be ignored, for although we are serious, as befitting Seniors, we are very much alive to the things of Carnegie Tech.

And so, when we go out into the gloom and the gleam of the world, we will take with us the remembrance of days when we gamboled and danced our way to graduation under the influence of a spirit magic—the personality of this Division of the Arts.



Senior Class Officers—Industries

Gilbert Heddaeus	*President*
Roy V. Mast	*Vice-President*
F. J. Simons	*Secretary*
J. L. Womack	*Treasurer*

GILBERT T. HADDAEUS, Age, 23.
Electrical Equipment and Construction

Pittsburgh, Pa. Allegheny High school

Δ T; A T; *Avo Club (2, 3, 4); President (3); Class Secretary (2), President (4); Student Council (4); Executive Committee Student Assembly (4).*

A tall, handsome, black-haired man known to us as "Ginkie", or George, is one of Pittsburgh's own; a real Tech man, and popular with all—the girls. Industries is his school by profession, but Design by heart. "Ginkie" will long be remembered by the Cornell trip and Senior Banquet. Yea! Brother.

ROY V. MAST, Age, 22. *Building Erection and Estimating*

Zanesville, Ohio Zanesville High School

K Σ P; A T; *Building Construction Club (3), President (4); Vice-President Class (4).*

Others than his intimate friends will remember the big Ohioan's smile and his slap on the back, especially the latter. Though he laughs at the name of "woman", we know how the big boys fall. He is going to Strive for SUCCE$$.

FRANCIS JOHNSTONE SIMONS, Age, 24.
Building Erection and Estimating

Charlestown, S. C. The Citadel, Military College

Opheleum; Class Secretary (4).

"Nippy" professes to be a woman-hater, but surely there must be some mistake; one in this class does not usually go to New York over Thanksgiving to have a tête-a-tête with a lamp-post. Not only is he famed as a woman-hater, but as a scholar, also. He came to Tech with a B. S. from The Citadel, Military College of South Carolina.

JOHN WOMACK, Age, 24.
Electric Equipment and Installation

Huntington, W. Va. Hinton High School

K Σ P.

'Way back in prehistoric times, long before the Bureau of Mines was built, and during the era of building, Johnnie Womack, or Womax, girded up his overalls and slipped away from his cliff home in West Virginia, to seek enlightenment at Tech. Result—an expert cut man and all-around Jazz hound.

Senior Class History—Industries

After every war, there is a certain period through which a country must undergo reconstruction. In using the word country, it is used in the general sense to refer to all enterprises of which a government is formed.

We, the Class of 1920, have just begun the reconstruction period in which we have been awarded the degree of Bachelor of Science in Industrial Science. The degree, new in its nature, is the first of its kind to be awarded in the United States. The demand for such trained men was so great during the war, that the necessity for such training has come to the foremost position. Although we are entering upon the world with the new degree, we fully appreciate that the public, in general, will at first refuse to recognize our training, but we do hope as the years go by, that the need for the training will increase as it is doing at the present time.

Now, kind reader, let us turn away from the serious side of life and look into the private college life of a student. We, like all others, have had our frolics, serious moments (such as when exams were on, and the like), but still we will never forget the happy days, and the friendships that have been formed.

In leaving, we part with only memories of P. T., Doctor Esquerre giving out protein, Pop Miller calling his roll for Drawing, the placing of the Plaid flag upon Pitt's flag-pole at Forbes Field, the fight at the welcoming of the 15th Engineers, and Clean-up Day, and last and most important, Recognition Day in June.

MARIAN LUCILE BACH, Age, 23. *Social Work*
Philadelphia, Pa. Wilkinsburg High School

Athletic Association (1, 2, 3, 4); Guild (1, 2, 3, 4); Dramatic Club (1, 2); Social Work Club (3, 4); Secretary (3); Y. W. C. A. (3).

In every class, Marian's The Shining Light,
And everyone knows she is awfully bright.
A social worker of fame she will be,
Unless she is captured by that New York "he";
The world will lose out if this be the case,
But the world and that man are sure running a race.

ELIZABETH KATHRYN BARRETT, "Kelly", Age, 20. *Secretarial*
Carnegie, Pa. Carnegie High School

Athletic Association (1, 2, 3, 4); Guild (1, 2, 3, 4); Dramatic Club (1, 2); Class Hockey Team (2); Class Volley Ball Team (4); Stringers (4).

"Kelly" is a lass who loses things faster than Miss Moore can pick them up. Don't think that bothers Elizabeth. She had decided to be a writer and then discovered her talents lay in playing the typewriter as fast as she plays the piano. "Kelly" is firmly determined on only one point—marriage. For it? Never.

MARIAN IRENE BATCHELLOR, "Batch", Age, 22. *Secretarial*
Buffalo, N. Y. Buffalo Seminary

Athletic Association (1, 2, 3, 4); Class Basketball Team (1, 2, 3, 4); Class Hockey Team (2); Senate Representotive (1); Dramotic Club (1); Y. W. C. A. (2, 3); Guild (1, 2, 3, 4).

"Batch" is a devotee of the doctrine of conscientious study, but she forsakes this at times, especially when that imposing figure symbolic of "Dawn" makes itself visible to her presence.

MARY E. BECHTEL, Age, 21. *Secretariol*
Pittsburgh, Pa. Peabody High School

Athletic Association (1, 2, 3, 4); Basketball (1, 2, 3, 4), Coptain (1); Student Senate Secretary (3); Senate Vice-President (4); Athletic Associotion Vice-President (2); Y. W. C. A. (3, 4), Vice-President (3), President (4); Junior Prom Committee.

Mary never misses out when there's work to be done, as can easily be seen by the Activities Notes.

MARY NELLE BIGLEY, Age. 23. *Secretarial*

Lima, Ohio Lima High School, Ohio Wesleyan University

Athletic Association (3, 4); Guild (3, 4); Y. W. C. A. (3, 4); Stringers (3, 4).

At perseverance Neel's a shark,
She sees through short hand in the dark;
And though she comes from Lima-bean,
She's one of the nicest I e'er have seen.

ELIZABETH T. BUCHELE, "Betty", Age. 21. *Household Economics (Teachers)*

Pittsburgh, Pa. Allegheny High School

Athletic Association (1, 2, 3, 4); Guild (1, 2, 3, 4); Dramatic Club (1, 2); Secretary Class (3); Junior Prom Committee.

Betty Buchele,
Spic and span,
A nice young girl
For a nice young man.
A little bit fussy
And very precise,
Why who would deny it?
She sure can entice.

GRACE A. BUTCHER, "Butch", Age, 22. *Costume Economics (Teachers)*

Canton, Ohio Canton High School, 1916

Athletic Association (1, 3); Volley Ball (4); Guild (1, 2).

"Butch", Mellon Hall's clever "Modiste", left her chosen vocation long enough to engage in her favorite sport, fishing, and was fortunate enough to catch a "Pike."

PAULINE MAY CAIN, "Dot", Age, 21. *Household Economics (Teachers)*

Pittsburgh, Pa. Westinghouse High School

Athletic Association (1, 2, 3, 4); Guild (1, 2, 3, 4); Stringers (4).

Dot's a very little body with lots of "pep",
If you don't believe her just watch her step.
She's a merry twinkle in her deep blue eye,
And lots of Irish wit—Oh, my!
"When, oh when, will the Engineers come?
It's so long since I've seen 'Willyum!'"

CHARLOTTE F. CRESSMAN, Age, 23. *Costume Economics*
Greenville, Pa. Greenville High School, Thiel College

Athletic Association (1, 2, 3, 4); Guild (1, 2, 3, 4); Y. W. C. A. (3).

Charlotte looks like a quiet little mouse, but to those of us who know her, Wow! Ask her what she does every Tuesday afternoon. Bet a cooky she won't tell you. Some of our Science Faculty can tell you. But Charlotte doesn't intend to play all her life, she aspires to a little shop of her own. French? Of course!

F. HELEN DURST, Age, 22. *Household Economics*
Pittsburgh, Pa. Sewickley High School

Athletic Association (1, 2, 3, 4); Guild (1, 2, 3, 4); Y. W. C. A. (3, 4); Junior Prom Committee.

Loved by all who know her—and the whole school knows her.

ISABEL EARSEMAN, "Iddie", Age, 21. *Household Economics*
Knox, Pa. Edenburg High School

Athletic Association (2, 3, 4); Volley Ball (4); Guild (1, 2, 3, 4); Junior Prom Committee.

"Most feminine girl at M. M." This quality with her "fresh, youthful beauty", won her the presidency of the "Pi Jilt" sorority. (Only member having four stars.)

BARBARA ELIZABETH ENDRES, Age, 21. *Secretarial*
Fairfield, Ala. Ensley High School, Ensley, Ala.

Athletic Association (1, 2, 3, 4); Basketball (1, 2, 3, 4); Hockey (1, 2, 3, 4); Volley Ball (4); Student Government Association (3); Senior Representative Senate (4); Guild (1, 2, 3, 4); Secretary Y. W. C. A. (2, 3, 4); Glee Club (4).

She is a conscientious worker in her studies as well as in her athletics. She is fair-minded, true and courteous. Despite all this, she is out for all the fun coming her way.

HELEN ESHELMAN, Age, 23. *Music*
Wilkinsburg, Pa. Franklin High School

She's a little thing and not given to shouting her own praises, but of course everyone knows that she is an "Artiste" in every sense of the word. And besides—shhh—(whisper)—she is intensely interested in Socialism and Tolstoi.

L'AMAUD FIRE, Age, 23. *Secretarial*
Pittsburgh, Pa. Allegheny High School

Athletic Association (1, 2, 3, 4); Guild (1, 2, 3, 4); Y. W. C. A. (1, 2, 3, 4).

To describe Maud, you'd have to say
She grows more clever every day;
Then add her charm and lovely features—
(Seems hardly fair to other creatures.)

IRMA FRIEDMAN, Age, 22. *Arts and Crafts*
Pittsburgh, Pa. Peabody High School

Athletic Association (1, 2, 3, 4); Basketball (2, 3); Hockey (2); Tennis (1); Volley Ball (4); Social Chairman (2); Head of Tennis (2); Vice-President Guild (4); Guild (1, 2, 3, 4); Business Manager Athletic Association (2).

"She's pretty to walk with,
And witty to talk with,
And pleasant to think on, too."

MARGARET MARY GAINES, "Peggy", Age, 21. *General Science*
Wilkinsburg, Pa. Wilkinsburg High School

Athletic Association (1, 2, 3, 4); Guild (1, 2, 3, 4); Y. W. C. A. (2, 3, 4).

Not happy unless working hard, always willing to help a sister with weaker chemical ability, "Gainesy" hibernates in the laboratory. When she does emerge, we find her a good sport and ready with good suggestions. We're proud of our Science "department".

ANTOINETTE VINCENTIA GIANNOTTI, "TONY", AGE, 22. *Household Economics*

GALETON, PA. Pennsylvania State College

Guild (4).

"Tony" came to us from State College and has won her way into our hearts. She is still loyal to State, but is a "Techite" now.

MYRTLE GOE, AGE, 23. *Costume Economics*

WESTON, W. VA. Weston High School; Madison Hall, Washington, D. C.

Athletic Association (1, 2, 3, 4); Guild (1, 2, 3, 4); Vice-President Sophomore Class (2); President Junior Class (3); Commencement Ball Committee (3).

Myrtle is one of our W. Va. workers. Just a few tips—a hard worker, of course, especially in procuring historic costumes at Skibo Inn, likes dances, says "you all" and is an all-round sport.

ISABELLA GREENBERGER, "ISSY", AGE, 23. *Household Economics*

CANTON, OHIO Canton High School

Athletic Association (1, 2, 3, 4); Guild (1, 2, 3, 4); Dramatic Club (1).

Special-delivery letters and long-distance phone calls are symbolic of our "Izzy," and yet a dietician she should be. Oh, those menus she planned, 'til our mouths fairly watered! I wonder if she will try them out in Akron?

ELEANOR T. GREENWALD, AGE, 22. *Decoration*

WILKINSBURG, PA. Wilkinsburg High School

Eleanor will tell you herself that she is more fond of dancing than of Decoration; and furthermore, if pressed, she may disclose her exact opinion of Cast Figure. But don't be alarmed, for Eleanor has a way of forgetting her troubles, and if work is to be done, she does things in a true Carnegie spirit.

REGINA T. GUENTHER, AGE, 23. *Decoration*
JAMESTOWN, N. Y. Jamestown High School

She has a horror of getting fat, but how could anyone be fat who works night and day in Decoration, and who walks forty miles on a Sunday—just for a stroll—and who spends her summers climbing mountains? We have an idea that in the future she will forget the hills and mountains in a climb toward Decoration Heights.

LUCY BLANCHE HART, "LUCE", AGE, 21. *Household Economics*
FREMONT, OHIO Fremont High School

Athletic Association (1, 2, 3, 4); Hockey (2); Shilling Board (2); Guild (1, 2, 3, 4); Secretary Class (2), Treasurer (3); Junior Prom Committee; Secretary Red Cross (3); Y. W. C. A. (3, 4), Y. W. C. A. Cabinet.

Lucy is short and sweet and neat,
The way folks love her can't be beat!
She loves old Tech and works for it,
But, nevertheless, her heart's at Pitt.

HETTY LIST HAZLETT, AGE, 21. *Social Work*
WHEELING, W. VA. Dana Hall, Wellesley, Mass.

President M. M. Social Workers' Club.

Hetty is a wonderful girl with a striking personality. If there is anything Hetty cares to do, why she learns to do it. She is an ideal combination of brains and charm.

ORRALL D. HEPBURN, "HEP", AGE, 22. *Secretarial*
LISBON, OHIO Ohio Wesleyan University

Athletic Association (1, 2, 3, 4); Guild (3, 4); Y. W. C. A. (1, 2, 3, 4); Forbes Hall House President (4).

"Hep" hustles and bustles
And then goes slow
But the heart of her
Is what we know.

ALICIA SELLERS GUTHRIE, Age 32. *Dramatic Art*
Pittsburgh, Pa. Dwight School, Englewood, N. J.

She's always ready with a come-back; one of our overseas lassies. Her pep's the Scotch that's in her.

GRACE FRANCES HENRY, "Asia", Age, 22. *Household Economics (Teachers)*
Pittsburgh, Pa. Peabody High School

Athletic Association (1, 2, 3); Guild (1, 2, 3, 4).

A merry twinkle in her eye,
A smile for all she passes by.
She has the brains, we all admit,
Always willing to do her bit,
But my! when she gets up to talk,
We think she's wound up like a clock.

EDITH HOBE, Age, 22. *Arts and Crafts*
Pittsburgh, Pa. Westinghouse High School

Athletic Association (1, 2, 3, 4); Hockey Team (2); Basketball (3); Volley Ball (4); Guild (1, 2, 3, 4); Advertising Manager Athletic Association (3).

She's a darling girl, but she's so artistic she hates to wear shoes.

FRANCES G. INSKEEP. Age, 21. *Household Economics*
Monticello, Ind. Monticello High School; Western College

Athletic Association (3, 4); Volley Ball (4).

Frances is calm and quiet
With a twinkle in her eye;
Perhaps you've chanced to spy it
As she has passed you by.

ELIZABETH KELLY, "K", Age, 22. *Household Economics*
Sewickley, Pa. Sewickley High School

Athletic Association (1, 2, 3, 4); Volley Ball (4); Hockey (2); Guild (1, 2, 3, 4); Y. W. C. A. (2, 4).

"K" has enough pep for the other fifty-nine Seniors. Her office was on first floor front, and usually occupied. She went "Nutz" in her Senior year. Is a very hard worker, altho' she doesn't look it (?).

MARGARET HULINGS LAPPE, Age, 23. *Secretarial—(Editorial)*
Pittsburgh, Pa. Peabody High School

Athletic Association (1, 2, 3, 4); Guild (1, 2, 3, 4); "Tartan" Staff (3); Junior Prom Committee.

Dear me! there's so much to say and so little space to say it in; but I can just tell you she's a good all-around sport, and smart, too! Has a great affinity for Washington, D. C.

MARY LOUISE MacCAUGHEY, Age, 22. *Household Economics*
Greenville, Ohio Greenville High School

Athletic Association Guild (1, 2, 3); President (4); Y. W. C. A. Publicity Chair (3); Finance Chair (4); French Orphan Chair (3, 4).

Merry-hearted Mary Lou
Works hard and plays hard, too.
Sprightly ways and dancing eyes,
Still with all she's very wise.
(It's a secret, so don't tell,
Mary Lou wears "grass skirts" well.)

HELEN ESTHER MARSHALL, Age, 25. *Costume Economics*
Pittsburgh, Pa. Peabody High School

Athletic Association (1, 2, 3, 4); Y. W. C. A. (3, 4); Student Government Association (1, 2, 3, 4); Guild (1, 2, 3, 4).

A cheerful word,
A winning smile,
What could be better
O'er life's long mile?

MARGARET ELIZABETH MATTERN, "Murph", Age, 21.
Household Economics

Hollidaysburg, Pa. Hollidaysburg High School

Athletic Association (1, 2, 3, 4); Soph Hockey Team (2); Guild (1, 2, 3, 4); Y. W. C. A. (2, 3, 4); Eaglesmere Delegate; Y. W. C. A. Cabinet (4).

Here's to "Murphy", our Penn State girl,
Whose life is always one big whirl,
And though she likes the men, that's true,
She's a practical lady through and through.

RHOBIE H. McCLOSKEY, Marietta Jazz Baby", Age, 20.
Household Economics—(Dietitian's Course)

Marietta, Pa. Marietta High School

Athletic Association (1, 2, 3, 4); Basketball Manager (2); Guild (1, 2, 3, 4); Junior Prom Committee (3); Social Chairman (4); Glee Club (4); Stringers (3, 4).

She goes to Tech, and oh how she can cheer for Tech, but still she runs to Pitt. She's "socially ambitious", you know, but she's a nice girl just the same. For a good all-around sport you can always depend on the girl from "God's country".

ANITA CLAIRE O'CONNOR, "Neity", Age, 20.
Household Economics—(Teachers)

Pittsburgh, Pa. South High School

Athletic Association (1, 2, 3), President Association (4); Basketball (3, 4); Volley Ball (4); Dramatic Club (1, 2); Cheer Leader (3).

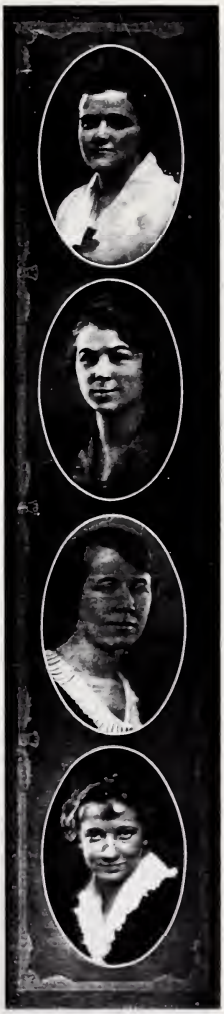
There is a lass, and she is fair,
Athletic, coy and free o' care;
A dancing sprite, an image gay,
To haunt, to startle and waylay.
A sweet Irish daughter of Ireland so green
Is bound to be happy where'er she's seen.

JANET RUTHERFORD, "Jane", Age, 21. *Secretarial*

Washington, Pa. Washington High School; Wilson College

Athletic Association (2, 3, 4); Guild (2, 3, 4); Vice-President Mellon Hall (3); President Woodlawn Hall (4); School Auditor (4); Senate (4).

A good joke, and the *Saturday Evening Post*, a dance, a salad, a show and a ballad, and Janet lives happily in Woodland Alley.



MARY L. RHOADS, Age, 20. *Household Economics—(Dietitian)*
Boyertown, Pa. Boyertown High School

Athletic Association (2, 3, 4); Guild (1, 2, 3, 4); Y. W. C. A. (2, 3, 4).

Mary's career at M. M. is a mere beginning, for in a few years we expect to see her at the pinnacle of success in the medical profession. However, she will have to be careful, or her vampish ways will lead her away from this well-chosen path. Mary is a big-hearted girl, and is always there when one needs a friend.

FRANCES A. ROBERTS, "Bobbie", Age, 21. *Secretarial—(Editorial)*
South Norwalk, Conn. Norwalk High School

Athletic Association (1, 2, 3, 4); Hockey (2); Volley Ball (4); Basketball (3); Guild (1, 2, 3, 4); "Tartan" (2, 3); "Thistle" (2, 3); Class President (2); Glee Club (4).

Tartan, Thistle, once president of her class.
She is a jewel, a jolly lass,
What more can man desire?
This is "Bobbie", sweet as can be,
The guiding star of the Z. L. E.,
She went "out" with them.

HAZEL C. SCHAFFER, "Schaf", Age, 21. *Secretarial—(Editorial)*
West Middlesex, Pa. West Middlesex High School

Student Activities Board (3, 4); Guild (1, 2); "Tartan" (2, 3); "Thistle" (3).

She's clever with her tongue; more clever with her pen;
And when she says she'll do a thing, why then
She does it.
This English Minor lassie is anything but highbrow;
She fascinated Mellon Hall with that wonderful left eyebrow.
The only eyebrow in captivity that can be wiggled
at will to register every emotion known to man.

MARY BLANCHE SHEPPARD, Age, 20. *Social Work*
Pittsburgh, Pa. Fifth Avenue High School

Basketball (1, 2, 4); Hockey (1, 2, 3, 4); Captain Hockey (2); Tennis (1, 2); Swimming (2, 4); Athletic Association (1, 2, 3, 4); Guild (1, 2, 3, 4); Dramatic Society (1, 2); Red Cross (3); "Shilling" Board (2); M. M. Social Workers' Club (4); Prom Committee.

There's one "Maggie Murph", who goes by "Pep".
For having school spirit she has quite a rep.
In swimming, in dancing, in hockey, in song,
She's always right there to join the throng.
For sewing, 'tis true she has no special talent;
In reforming the natives her efforts are gallant.
Her mind in the meantime is hectic in state,
To decide 'twixt the lessons and staying out late.

ANNA GLENN SHERIFF, Age, 21. *Secretarial*
Blairsville, Pa. Blairsville High School

Basketball (1, 2); Hockey (2); Tennis (1); Volley Ball (4); Captain (4); Athletic Association (1, 2, 3, 4); Guild (1, 2, 3, 4), Vice-President (3); Junior Prom Committee; Stringers (3, 4); School Pianist (4).

There's music in her fingers and music in her toes,
And everybody loves her, everywhere she goes.
She's very independent, and very full of wit—
Has an S. A. E. pin, and is very fond of it.

MARGARET SLOAN, "Sloan", Age, 22. *Household Economics*
Emlenton, Pa. Emlenton High School

Secretary Class (1); Treasurer Athletic Association (1); Secretary and Treasurer Guild (3); Y. W. C. A. (2, 3, 4); Guild (1, 2, 3, 4); Athletic Association (1, 2, 3, 4).

Though Sloan's a girl quite little and slight,
She does her work with all her might;
And he will be a lucky man
Who eats from her bowl or frying pan.

LUELLA SMITH, "H. P.", Age, 23. *Household Economics*
Kittanning, Pa. Kittanning High School

Guild (1, 2, 3, 4); Athletic Association (1, 2, 3); House President Mellon Hall (4); Senate (4).

Favorite pastime, mending sweaters for the football team. Luella is true to her convictions, and altho' she is little, she has a big heart and is always there to help.

MARGARET SONDHEIM, Age, 22. *Secretarial—(Editorial)*
New York, N. Y. Peabody High School, Pittsburgh

Guild (1, 2, 3, 4); M. M. "Tartan" Editor (3).

Here's a girl with a brain that's keen, a heart that's tender and a manner gentle and winsome.

MANILLA ALTHEE STODDARD, Age, 22. *Social Service*
Wellington, Ohio Wellington High School; Ohio Wesleyan University

Athletic Association (3, 4); Guild (3, 4); Y. W. C. A. (3, 4); Social Work Club (4).

Manilla has changed her tune,
And may change it again very soon.
Where once she hummed "Delaware, the Beautiful",
She now seems so sad and dutiful;
And with her funny, giggly sigh,
Murmurs, "I'll remember you till I die".

HARRIET STONE, "Skinny", Age, 27. *Household Economics*
Carmichaels, Pa. Cumberland High School

Athletic Association (1, 2, 3, 4); Basketball (1, 2, 3, 4); Hockey (1, 2, 3, 4); Tennis (1); Volley Ball (4); President Student Government Association (4); President Freshman Class (1); Senate Representative (2, 3); Chairman Red Cross (3); Treasurer Y. W. C. A. (3); Shilling Board (2); Member Council (4); Member Guild (1, 2, 3, 4).

Conscientious "Skinny", loved by every girl,
Has so many "meetings", she's always in a whirl;
Forever in a hurry, forever late to class,
Funny that with A's and B's she should always pass.

HELENA T. WALTER, Age, 21. *Household Economics (Teachers)*
Pittsburgh, Pa. South High School

Hockey (2); Volley Ball (4); Athletic Association (1, 2, 3, 4); Guild (1, 2-3, 4); Y. W. C. A. (3, 4).

A great big heart, and a friend so true,
Is just what everyone thinks about you.

JEAN WESSNER, Age, 20. *Music*
Pittsburgh, Pa. Peabody High School

We promised faithfully to avoid all mention of Jean's hair, but we are glad she didn't make us withhold anything else—for instance, her popularity, her enthusiasm, her good nature and her ability. Ability? You can tell just by the ease and grace with which she boards a Negley car, in company with that musical monstrosity known as a 'cello, that she is a musician to the manner born.

FRANCES BLAIR WING, Age, 23. *Costume Economics (Teachers)*
New Castle, Pa. New Castle High School

Guild (1, 2, 3, 4).

She may think she's a bird because she has "Wings", but she's a cracker of the "Graham" variety.

ALICE MARGARET WIRTH, Age, 21. *Costume Economics*
Pittsburgh, Pa. Fifth Avenue High School

Hockey (2); Basketball (2); Volley Ball (4); Guild (1, 2, 3, 4); Athletic Association (1, 2, 3, 4).

"Alice and Al"—sounds pretty, doesn't it? And mighty familiar, too. Alice can design things unusually well. Perhaps that is how she captured her victim—had designs on the poor, unsuspecting man.

HELEN I. YOUNG, Age, 22. *Secretarial (Editorial)*
Bellevue, Pa. Bellevue High School

Hockey (3); Basketball (2, 4); Guild (1, 2, 3, 4); Athletic Association (1, 2, 3, 4); Tartan (2, 3); Y. W. C. A. (2, 3, 4); Treasurer (4).

"Helen I." is our coming playwright and scenario writer. Although Helen manages to have a very good time, she appears at school every day, last—but not least. She says she will never marry, which leads us to believe that she must be accompanied by girls on her various Wednesday and Sunday excursions.

HELEN YOUNG, "Bill". Age, 23. *Household Economics*
Grove City, Pa. Grove City High School; Grove City College

Basketball (1); Volley Ball (4); Guild (1, 2, 3, 4); Athletic Association (2, 3); Cheer Leader (2); Social Chairman (3).

"Bill" is a good sport and always ready to help a friend. She is official date-maker of Mellon Hall, but just the same she is a member of the "Pi Jilt".

ELLEN CROWE. *Dramatic Arts*

PITTSBURGH, PA.

Senate (4); Class Secretary (3).

Ellen has all the charm of a mid-Victorian, tinged enough with the Russian Ballet to make her a militant among the ladies. One of the cleverest members of the Dramatic Department, and her talent will be greatly missed.

KATHRYN HARRIS, AGE, 22. *Decoration*

WASHINGTON, D. C. Central High School

"I'm from Washington; where do you all live?" were the first words we heard from Kathryn—but the fact that she lives in Washington must not detract from your interest, for Kathryn has a charming personality and a fund of wit, and the Southern inflection has captivated us.

DAVID H. ABRAMS, Age, 24. *Commercial Engineering*
Pittsburgh, Pa. Central High School

Φ E Π; *Varsity Basketball (2, 3, 4); Captain (3); Varsity Baseball (3, 4); Fulcrum Club (1, 2, 3); Commercial Club (4); Quakers (2, 3, 4), Secretary (4); Wobbles (4).*

"Lefty" would never cut a Spanish class; in fact, he was known as the class grind—I don't think. He acquired the name of "Lefty O'Hara" in his Senior Year because of his tortoiseshell glasses. "Lefty" was a basketball shark, and was prominent on the baseball team.

RAYMOND C. ALTERMATT, Age, 24. *Building Construction*
Erie, Pa. Erie High School

Δ E Ω; *Basketball (1); Building Construction Club (1, 2, 3), Treasurer (2), Secretary (3).*

"Aldie"—the girls call him "Ray"—worried the faculty at Erie High for four years until they decided to give him a diploma. For the last three years he has been building aircastles at Tech, as well as absorbing some good practical knowledge about how to put up a building that will make the Singer Building look like a model of "Skibo Inn".

FREDERICK D. ANDERSON, Age, 22. *Mining Engineering*
Wilkinsburg, Pa. Wilkinsburg High School

Metallurgical and Mining Society (2, 3, 4).

"Andy" is very ambitious, going to school both day and night. He is a regular originator of excuses for lateness; one day a drove of pigs held him up, and another time he ran into a banana orchard.

JAMES G. ALLEN, Age, 23. *Electrical Engineering*
Cumberland, Md. Allegheny County High School

Allen believes that to be an Electrical Engineer one must, above all, act electrically. This means to follow the lines of least resistance. "J. G." has acquired that fortunate trait of being able to think technically, without too much thinking in technics. We hear that Prof. Sproul and Allen will design an automobile that will revolutionize the auto industry. One of the characteristics of this wonderful machine will be three speeds to the rear and one ahead. We wish them success.

TERRENCE WENDELL ALLSWORTH, Age, 26. *Mechanical Engineering*

Ordway, Colo. La Junta High School, La Junta, Colo.

T B II; Σ A E; *Band (2); Tartan (3, 4), Editor (3), Business Manager (4); C. M. E. S. (2, 3, 4), Vice-President (3), President (4).*

(Prof.) Allsworth, the man who asked if Doc James "worked here, or is he just a professor?" "T. W.", the Denver Wildcat, fears neither water, nor China; divides his time between C. M. E. S., the *Tartan*, and women. A genius for work, money-making and profanity.

CHARLES L. ALTSCHUL, Age, 21. *Commercial Engineering*

Springfield, Ohio Springfield High School

Assistant Baseball Manager (3); Vice-President Dormitory No. 2 (2); Vice-President Dormitory No. 6 (4); Commercial Club (2, 3, 4); Debating Club (1); Buckeye Club (3, 4); Quakers (4).

"Fat" is a cash register with a ring of its own. Charlie's hobby is correcting professors, thereby proving himself of invaluable assistance. He is some jazz hound, and delights in leading snake dances.

HAROLD GLENN ATCHLEY, Age, 22. *Mechanical Engineering*

Hoytville, Ohio Hoytville High School

Σ A E; *C. M. E. S. (2, 3, 4); Tartan Circulation Manager (3, 4).*

Four years and some months ago there dropped into our midst "Kid Harold", the child wonder. We do not know where his home is (neither does he), for every year he wanders into Pittsburgh on his motorcycle from a different direction. "Atch" can always be trusted to get things back together again.

LINDLEY DALE AUL, Age, 24. *Mechanical Engineering*

New Castle, Pa. New Castle High School

Σ N; *Dragon; Delta Skull, Lawtochfraric; Plebe Basketball Squad; Mech. Football Team, 1916, 1917; Freshman Banquet Committee; Sophomore Banquet Committee; Masonic Club; Mystic Seven.*

Dale is a little man, but he certainly does get around the campus. His one failing seems to be Forbes Hall. It has also been whispered that Dale is strong with the ladies over at ——. Nevertheless, since he hails from New Castle, one would rather expect him to be a ladies' man.

HARRY KOPP BAKER, Age, 24. *Commercial Engineering*
Danbury, Conn. Danbury High School

Commercial Club (1, 2, 3, 4); New England Club (1, 2, 3, 4); American Association of Engineers (4).

"Sleuth", King George's prime minister, and also an employee of King Edward, never allowed a good time to interfere with his work. Harry was strong for the ladies.

GEORGE C. BALAURIE, Age, 22. *Commercial Engineering*
Brooklyn, N. Y. Salem High School, Salem, Ohio

Σ A E; T B II; *Wrestling (2); Musical Clubs (1, 2, 3, 4); Librarian (3); President (4); Fulcrum Club (2, 3); Commercial Club (4).*

George has been part of the regular equipment of the Musical Clubs for four years. He is the Commercial Nightingale, and is fond of serenading the Margaret Morrison girls. He is very ambitious, and his future is bright.

WILLIAM EDWARD BARON, Age, 27. *Civil Engineering*
McKean, Pa. Edinboro State Normal School

Civil Engineers Society (2, 3, 4); Entertainment Committee (3, 4).

Outside of the fact that he comes from McKean and taught school in the wilds of Wyoming, he is all right. We understand from one of his female classmates at kindergarten, that in his childhood days he had nice long curls. We don't doubt it, for he still has a few left. "Bill" is one of our most conscientious workers, and is bound to make good.

LOUIS T. BARRY, Age, 26. *Commercial Engineering*
Olean, N. Y. Olean High School

Σ A E: *Class Football (3); Class Basketball (3); Class Baseball (3); Commercial Club (2, 3, 4); Quakers (3, 4); Secretary and Treasurer Tech Flying Club (4); Chairman Science Stag (3); New York State Club (2, 3); Historian Quakers (4); Wobblers (3, 4).*

"Admiral" has a wonderful line, and we wonder how he gets through school without books. 'Tis said Mr. Reed furnishes him with books. He is also one of the original "Junior Commercials". Is truly a high-flyer, but doesn't indulge.

JAMES WILLIAM BATMAN, Age, 22. *Building Construction*

Luray, Pa. Luray High School

Ophelcum; A T; *Dragon; Southern Club (1, 2, 3, 4); Building Construction Club (1, 2, 3, 4); President Class (2); Musical Clubs (2), Assistant Manager (2); Chairman Class Banquet (2); President Students' Assembly (3); Member Executive Committee (3); Chairman Liberty Loan Memorial Fund (3); Member Student Council (3); "Thistle" Board (3); President Students' Council (4).*

"Pinky", a man of great ability in many lines, specializing in executive and feminine. His motto: "Do not love one girl a lot, but love a lot of girls a little". You cannot beat a red-head.

RAY GILBERT BERGSTROM, Age, 25. *Architecture*

Duluth, Minn. Duluth Central High School

T T Φ; *Tech Architectural Club.*

One of the few Architectural Engineers who believes implicitly in his chosen profession, and we know that success is assured for him. Besides being studious, Bergie "steps out" to all school functions, and is seen occasionally peering around the corner of the P. & D. Department.

LOUIS MERTON BLOCH, Age, 23. *Mechanical Engineering*

Hartford, Conn. Hartford High School

B; *Samaeh (Cornell University); C. M. E. S. (3, 4); Menorah (3), (Cornell) Menorah (1, 2).*

He came from Cornell, but now Tech is the only school for him. This man sure does like to sing; the professors know it, too. We must say that many a time he starts something when he introduces harmony to the Mechanicals. We hear that he is particularly fond of the nurses in the Pittsburgh District.

ROBERT C. BOWERS, Age, 26. *Architecture*

York, Pa. York High School

President Tech Architectural Club (3).

A south-pawed artist of pencil and brush, recipient of the first medal of the year. Bobby is not built on the sky-scraper plan, and often passes among his fellows unobserved, and a bit reckless—Friday night in charette week—who is this woman? As a massier, Bob, you'd make a good paperhanger.

JOHN E. BOWLER, Age, 23. *Civil Engineering*
Bangor, Me. Bangor High School

Ξ Σ T; *Senior Civil Basketball Team; Carnegie Clan Committee; Junior Banquet Committee; Civil Engineers' Society (2, 3, 4).*

Kind readers, we have with us one John Bowler who was sent to us from Bangor, Maine. If you should care for a few moments of entertainment, let him talk to you. His talk can be measured by the mile, for nothing is outside his scope of conversation. He is a first-class student and a fine fellow.

JACOB BRAVERMAN, Age, 24. *Chemistry Science*
New York, N. Y. Bakmut Imperial High School, Russia

Secretary Cosmopolitan Club (3).

Jake's theories concerning various and diverse abstract things are very importunate. His boiling-point is reached in Economics; there Jake's theories fall to pieces.

HARRY F. BREMMER, Age, 25. *Architecture*
Baltimore, Md. Milton University School

Dragon; T Σ Δ; *Track (1, 2, 3, 4); President Design School (4); Vice-President Student Council (4); President Board of Control (4); President Tech Architectural Club (3, 4); Junior Prom Committee (3); Class Secretary (2, 3).*

Harry expected to step out into "the wide, wide", a couple of years ago, but Ole Man Mars tapped him on the shoulder, and he is with us again this year, the same ole "Brem", but stronger than ever; and he received the presidency of the school a second time. His school record has truly been an enviable one, and the drafting room and the track team will miss him greatly.

WILLIAM J. BRENNEN, Age, 22. *Electrical Engineering*
Scottdale, Pa. Scottdale High School

Σ A E; *Treasurer Carnegie Branch of American Institute of Electrical Engineering, 1918, 1919, 1920.*

"Bill's" Irish smile and good humor have made him very popular, but you "wanna look out" when "Bill" mistakes Prof. Work for a student. He developed an attitude toward Work in his Junior year which has seldom been excelled at Tech. "Bill" is endowed with that quality which has enabled him to come to class unprepared and to make scientific guesses which were absolutely correct.

ALEXANDER LLEWELLYN BUCHANAN, Age, 22. *Dramatic Arts*
Pittsburgh, Pa. Peabody High School

A X A: *Glee Club (2); Author, Director and Producer of the "Bohemia Unlimited" Extravaganza, 1919.*

A good Indian! If "Buck" had been named in characteristic Siwash style, he might have been called "Mawhump", meaning pep, or "Umpty Hump", cordiality, "Chow Chow", gloom-dispeller, or perhaps a combination of all three—"Mawhump Umpty Hump Chow Chow".

HENRY C. BROCKMAN, Age, 25. *Architecture*
La Porte, Ind. La Porte High School

Σ N; *Junior Prom Committee (3); Sophomore Hop Committee (2); Class President (2); Senate (3); Tech Architectural Club; M. P. L.; Business Manager "Bohemia Unlimited" (4).*

"Brockie" has won his way into our hearts by his spontaneous and good-natured grin that seems to be on tap for all occasions, even in those trying but most pleasant days of "Bohemia Unlimited", when he was on the job morning, noon and night, working for its success. In fact, he became so efficient, that an elaborate system was inaugurated—"The Cigarette Book". P. S.: We're square! eh, Brock?

NEAL J. CAMPBELL, Age, 22. *Civil Engineering*
St. Louis, Mo. Central High School

Σ N; *Dragon; Assistant Manager Football (3); Manager Football (4); Senior Civil Basketball; Civil Engineering Society (2, 3, 4), Secretary (3).*

Jewelry salesman or student, which? Yes, this even-tempered, flaxen-haired youth from Missouri came to Tech. Why? We do not know. Apparently to sell jewelry, and manage the football team in his spare moments. Despite his jewelry, Neal is well liked by his classmates and has a line that is surpassed by none.

SAMUEL J. CAPLAN, Age, 27. *Chemical Engineering*
Pittsburgh, Pa. Allegheny High School

Glee Club, 1912, 1913, 1914; Chemists' Club.

"Cappie" snatches data on solubility of chewing tobacco in petroleum oils. Agrees with "Doc. James" that chemistry can be absorbed through tortoiseshell glasses. Was at University of Beaume, France, and came back to Tech after four years of French environment.

HOMER F. CAREY, AGE, 23. *Mining Engineering*
OAKMONT, PA. Oakmont High School

Θ Ξ; *Dragon; Football (2, 3, 4); Basketball (1, 2, 3, 4), Captain (4); Mining and Metallurgy Society (2, 3, 4).*

"Scoops" celebrated the return of the Engineers by chasing the Pitt student body up their own campus. He is going to open a mine in New York under the Woolworth Building, in order to be near a certain girl who likes aviators. Carey wishes that the faculty would co-operate with the Davis Theater management in arranging schedules.

GILBERT CHURCH CLARK. AGE. 23. *Commercial Engineering*
WASHINGTON, D. C. Eastern High School

Ξ Σ Υ; T B Π; A A N; *Dragon; Glee Club (1); Fulcrum Club (1, 2); Editor-in-Chief "Thistle" (3); Custodian of the Seal, Quakers (4); Commercial Club (Vice-President (3), President (4); Interfraternity Council (3, 4).*

"Champ", the senator from Washington, is the chief engineer of the good ship "East Liberty Y. M. C. A.", shoveling gas being his specialty. He is a sleepless wonder, worked his way through school and still made Tau Beta Pi. He is quite some editor.

MARTIN IRVING COHEN, AGE, 21. *Commercial Engineering*
NEW YORK, N. Y. Townsend Harris Hall

Φ E Π: *Interfraternity Basketball (1, 2, 3, 4); C. I. T. Debating Society (1); Band (3); Commercial Club (1, 2, 3, 4); "Tartan" (2, 3, 4), Assistant Advertising Manager (3), Advertising Manager (4).*

"Moiphy" has aspirations to be a New York policeman. It is also said that he takes a bath every time he goes East. He is known as the suit and cloak shark from New York, his principal side issue at Tech being to induce the Pittsburgh merchants to advertise in the *Tartan*.

HAROLD GILBERT CULIN, AGE, 22. *Electric Equipment and Installation*
ALLENTOWN, PA. Central High School, Bethlehem, Pa.

Ophelcum; Aro Club (1, 2, 3), Secretary (2), President (3); Band (1, 2, 3), Drum Major (3); Assistant Tennis Manager (2); Division Cheer Leader (2); Student Organization Committee (2).

Three times three for "Rummy", the lad that knocked the -ELL out of Cornell's ninety-three-piece band. He is always full of the spirit of TECH. and a "hard, conscientious worker". When it comes to dancing, well, he is in a class of his own; and OH! how he can shimmie.

CLARENCE HAYWOOD DAVIS, Age, 22. *Mechanical Engineering*
FARRELL, PA. Farrell High School

Σ A E; *C. M. E. S. (2, 3, 4), Treasurer (4); Wobblers (4).*
"Dave" is a man who comes from Farrell—but who wouldn't? He and girl go pretty well together, and they say he likes to go to the South Side to visit relatives (?). He can't lie to us, because we know why. He is our authority on "Language" and chewing tobacco.

LEO EVERETT DEITRICH, Age, 24. *Physics*
HUBLERSBURG, PA. Walker Township High School

Leo does not let 8:30's worry him one bit. The class begins when he comes around. He was never known to be in a hurry, but he gets there every time. Very thoughtful and will surely make his mark in his chosen field at Physics.

LIVINGSTON DISBROW, Age, 22. *Mechanical Engineering*
NORWALK, CONN. Norwalk High School

Τ Γ Φ; *East Dormitory Football (2); C. S. M. E. (2, 3, 4); A. A. E. (4).*

"Dis" comes from a little Quaker town in Connecticut, and he seems to live up to the Quaker ideals. He has many contentions with himself as to whether social duties or studies should come first. He evidently lets his social duties prevail sometimes. Though slow, he is like a postage stamp, he will stick till he gets there.

CLARENCE ROBERT DOBSON, Age, 24. *Commercial Engineering*
CEDAR RAPIDS, IOWA Cedar Rapids High School

Τ Β Π; *Commercial Baseball (3); "Tartan" (2, 3); Charter Quakrr—President Quaker Club (4); Commercial Club (4); Fulcrum Club (2, 3); Masonic Club; Senior Commercial Representative; Sophomore Mechanics' Scholarship, 1916.*

"Dobby" is the nerviest man in class. Geck says he has the greatest analytical mind in Tech. No wonder he made Tau Beta Pi. "Dobby" can always recommend something "good to eat".

JOSEPH DOPLER, Age, 22. *Machine Construction*
Dunkirk, N. Y. Dunkirk High School

Tech Mechanics' Club (3).

Wafted on the atmosphere in the cadence and tone of a funeral march, you may frequently hear the ditty, "One Keg of Beer for the Four of Us". It's only "Wild Joe" from Dunkirk.

WILLIAM EDWARD DOUGHERTY, Age, 21. *Chemical Engineering*
Tarentum, Pa. Tarentum High School

Σ N; *Chemists' Club (2, 3, 4), Vice-President (4).*

"Doc" devotes two hours a week to the science of "Five Hundred". His week-end trips to Tarentum have deprived many "Maggie Murphs" of their "Chance in Life".

FRED B. DREIFUS, Age, 21. *Metallurgical Engineering*
Pittsburgh, Pa. Peabody High School

Chairman Junior Prom Committee (3); Metallurgical and Mining Society (3, 4), Treasurer (3); Junior Associate Member American Institute Mining Engineers (4); Student Member Associated Engineers (4).

One man in the class who has common sense—he came from Pitt. "Barney" has the hardest schedule in school—he even admits it. His favorite studies are Physical Chemistry and Economics. He likes waitresses, wine, and women, and claims that you can't have a Junior Prom without music.

ARTHUR LAWRENCE ELLIOTT, Age, 22. *Commercial Engineering*
Glen Cove, N. Y. Sewickley High School

Σ A E; *Baseball (3, 4); Commercial Club (2, 3, 4); The Quakers (4).*

"Swede" is Horst's understudy in Spanish. He is a teacher in Penmanship and English, but no one can read and understand his writing. He always calls for coffee at Charley's place. He was a sailor of the good ship "Hardship" in the fresh-water navy.

MILTON EPSTEIN, Age, 21. *Chemical Engineering*
Denver, Colo. Manual Training High School

"Eppie", the only man known who can write upside down. The steady scratch of his pen leads us to believe that oil, rather than ink, should be used. Hails from Denver, and as a "Gob" has sailed across many puddles on our beloved campus.

MARCUS A. FAIR, Age, 24. *Commercial Engineering*
DuBois, Pa. DuBois High School

Σ N; *Dragon; Delta Skull; Lawtochfrarie; Band (1, 2, 3); Senate (2, 3, 4); Treasurer (4); Freshman Regulation Committee (3); Class President (3); President Interfraternity Council (4); Masonic Club; Quaker (4); Fulcrum Club (2); Commercial Club (3, 4).*

"Marcus Willie Fair" got seven cents an hour in his Junior Year in accounting, but we hope he makes more when he graduates. He is a big fellow with a little whistle. Marcus is popular with the ladies, but it is hard to tell who stands first.

FRED E. FLADER, Age, 22. *Mechanical Engineering*
Castile, N. Y. Castile High School

C. M. E. S. (3, 4).

Fred claims that he gets splinters in his fingers every time he scratches his head, but we honestly believe that he has something more noble than wood therein. We usually see him around the Dean's office. He claims that he has important business there. Maybe he has, because Fred is the only married man in the section.

GEORGE N. FLOCOS, Age, 32. *Electrical Engineering*
Pittsburgh, Pa. Greek Gymnasium, Athens, Greece

Carnegie Tech A. I. E. E. (3, 4); Cosmopolitan Club (3, 4).

Flocos is one of the chief exponents of personal liberty in the electrical section. He does not believe in memorizing too many details, to be quickly forgotten, and he says he intends to throw his slide rule away after graduation. He is a very methodical student and requires a mathematical demonstration for everything, including the "shimmie".

EDWIN EDWARD FLYNN, AGE, 21. *Machine Construction*
OLEAN, N. Y. Olean High School

Captain and Manager "Flynn's Backyard Stars", (2, 3); Dormitory Association (1, 2, 3); Chairman Tech Mechanics' Club (2, 3); Class Smoker (2).

The boy wonder of Olean, and the pride of his parents. His agility in jumping freights manifests itself in the ease with which "Ed" acquires new dance steps. He organized and managed "Flynn's Backyard Stars"—Tech's only winning ball team in 1919.

WILLIAM C. FOX, AGE, 26. *Metallurgical Engineering*
PUT-IN-BAY, OHIO Put-in-Bay High School

Chemists' Club (2); Metallurgy Society (3, 4), Treasurer (4); Buckeye Club Secretary (3, 4); A. A. E., Jr., Member, Secretary; A. I. M. E., Jr., Member; Newman Club (2, 4); "Hot Blast" Editor (3); East Dormitory Governing Board (3), President (4); "Tartan" Business Staff (4).

The hardest worker of the gang, as Doc's assistant he took special delight in flunking out Soph Metallurgists and Chemists. He came into our class after making poisonous gas at Edgewood, Md. He wanted the last year to be easy, so he could outshine Pete in his favorite pastime, dancing.

D. B. GAWTHROP, AGE, 23. *Chemical Engineering*
WILKINSBURG, PA. North Denver High School

Θ Ξ: *Tennis Team (3); Junior Prom Committee; Chemists' Club (2, 3, 4); Interfraternity Council (3); Chairman Interfraternity Dance Committee (3).*

"Don, the Economics Wildcat", spends Saturdays in California, and noon hours at "Maggie Murph"; says he doesn't like the women, but we have yet to find the female whom he hasn't asked for a date. Pastime: Flooding Laboratories.

CLARENCE HOWARD GENS, AGE, 22. *Civil Engineering*
FREDONIA, N. Y. Fredonia Normal School

Σ A E: *Freshman Basketball (1); Senior Civil Basketball; C. E. Society (2, 3, 4); A. A. E. (4).*

In the fall of 1916 an exceedingly loud noise was heard on the campus, and since then there has always been more or less of a rumpus whenever Clarence was around. "Jack" is quite a rusher, especially when it comes to the women. He always has his work out ahead of everyone else—not saying how well it is done.

JAMES FRANKLIN GIFFEN, Jr., Age, 26. *Commercial Engineering*
Wheeling, W. Va. University of Michigan

Σ A E; *Delto Skull; Lawtochfrarie; Cross Country (1); Track (3, 4); Class Vice-President (3), President (2), Vice-President (1); Science School Senate (1, 2, 3, 4); "Thistle" Board (3); Junior Prom Committee (3); Fulcrum Club (2); Commercial Club (3, 4); Interfraternity Council (3, 4); Quakers (3, 4); Wobblers (4); Masonic Club (4)*

"Jimmie", the J. P. Morgan of the Commercials, and President of the Wheeling Dollar Savings and Trust Company, is always ready to have an "Honest scrap", and especially believes in patronizing Wheeling stogies. He runs indicator cards on steam turbines, and discovered a new use for the Prony brake. Ladies' man.

ISRAEL GOLDMAN, Age, 29. *Mining Engineering*
Chicago, Ill. Rock Island High School

Φ E Π; *Track Squad (2); Cross Country Team (3); Mining and Metallurgical Society (2, 3).*

"Sunny" Goldie tried to convince Prof. Crabtree that the Senior Mining schedule was too heavy. Prof. Crabtree agreed, heartily, by adding seven more hours. "Sunny" admits he runs the Chemical Lab. of J. & L. Steel Plant.

HARRY GINSBURG, Age, 23 *Civil Engineering*
Pittsburgh, Pa. Central High School

Φ E Π; *C. E. Society (2, 3, 4), Vice-President (3); Reporter C. E. Society (4).*

Give him plenty of time for cross-examination, "Ginny" seldom fails to obtain enough information from the prof to go ahead with the recitation. He got through the first two years by hard work, worried through the Junior Year, and neither worked nor worried through the Senior Year. He'd sooner worry than work, and sooner not than either. His ambition is to revise "Pop's" book on Structures.

HAROLD M. GRAHAM, Age, 23. *Mechanical Engineering*
Pittsburgh, Pa. Fifth Avenue High School

Radio Club (2); C. M. E. S. (4).

Graham is very conscientious about school work, and some days he thinks he doesn't need to come, so he stays in bed. We can forgive him for this, because he gets away with things, anyway. We believe sometimes that he must study in bed.

M. EDWIN GREEN, Age, 23. *Architecture*

Kerhonkson, N. Y.

Σ P; *Delta Skull; Sennachie; Dragon; Varsity Basketball (2), Captain (3); Track (1); Class President (2, 3); Glee Club (1); Vice-President New York State Club (2); T. A. C.; President Tech Flying Club (4); President Student Senate (4); Student Council (4); "Tartan" (2); Senior Reception Committee (4); Design Ball Committee (4).*

We all wondered why "Ed" was so different until we heard the name of his home town, but despite this drawback he has been one of the most active, popular men in school since he breezed in. His ante-bellum pastime used to be basketball, and he captured the 1917 Varsity. But now—well. he'd rather call a Senate meeting.

EDWARD McCULLOUGH GRIFFITHS, Age, 23.

Mechanical Engineering

Ingram, Pa. Crafton High School

Tennis Team (3, 4); Glee Club (2, 3); C. M. E. S. (4).

Where is there a man who never gets angry? Such a man is "Griff". Even though he does commute from Ingram, a smile is always on his lips. And worry—seems that he has none. If goodfellowship has anything to do with success, "Griff" will sure be a great man.

HARRY E. HALDEMAN, Age, 21. *Chemistry Science*

Lexington, Ohio Mansfield High School

President Dormitory No. 4 (4); President Buckeye Club (4); Secretary Chemists' Club (4); "Tartan" Staff (4).

In 1916 there appeared on the Tech campus a demure little youth from Ohio. He was green, oh much! but after four years of constant exposure to Technology he is the pride of his class. In Sunday clothes he is a killer, and in a Laboratory apron he is a scientific wizard. Pastime—writing letters to Ohio.

LAURENCE H. HALE, Age, 26. *Electrical Engineering*

Hartford, Conn. Hartford Public High School

Τ Γ Φ; Τ Β Π; *Radio Club (1, 2); Science Stag (2); A. I. E. E. (2, 3, 4); A. A. E. (4); Class Vice-President (3); Committee on Statistics (3).*

"Larry" is from Hartford, by Heck! He came to Pittsburgh in 1914 to study Electrical Engineering. After two years in France with the Engineers, he came back to get a goatskin. He has a good record at McDougal's.

RAYMOND HAWKE, Age. 21. *Industrial Education*
Pittsburgh, Pa. Fifth Avenue High School

Band (2, 3, 4); Business Manager Band (4); Club Room Committee (1); Big Four (3); Teachers' Club (1, 2); Athletic Representative (2).

"Jerry" is a very popular boy in the school. He is very industrious, especially in the Wood shop about Christmas time. It is reported that our "Jerry" is contemplating matrimony. Poor boy, we wonder what made him sore at himself. Can you hear him?—"Let's go, Tech!"

EDWARD F. HIRSCH, Age, 24. *Civil Engineering*
Pittsburgh, Pa. Carnegie Tech Night School

Θ Ξ; T B Π; *Delta Skull; Dragon; Tennis Manager (3, 4); Senior Civil Basketball; Secretary Civil Engineers' Society (2); Secretary Class (3); Chairman 15th Engineers' Reception Committee (3); Science Stag Committee (3); Elected Editor "Thistle", (3); Geo. H. Smith Scholarship (4); Secretary Leader (1).*

Read his honors; he admits them! so why argue? "Eddie" is a steady, hard-working student, and yet finds time for numerous activities. If we had more of his kind here, this school would be improved. Ask "Eddie" how to build a Gym. by petition.

WALTER H. HOLMQUIST, Age, 27. *Architecture*
Washburn, Wis. Washburn High School

Here's to the Option who is not afraid to do research work in construction, but some of us are wondering why he didn't change to Option I, since the Gas Station competition. You sure do know how to pick the good ones, Walter!

HOWARD E. HORNICKEL, Age, 25. *Metallurgical Engineering*
Pittsburgh, Pa. Kiskiminitas School

B Θ Π.

Was for two years at the Colorado School of Mines. Though not with us the entire four years, those who have come in contact with him realize that Carnegie Tech has profited by his presence. He has won a place in the hearts of his classmates, and merits their highest esteem.

LOEWY HOTT, Age, 24. *Mechanical Engineering*
Keyser, W. Va. West Virginia Preparatory School

Σ A E; *C. M. E. S. (2, 3, 4); Glee Club (3, 4); A. A. E. (4); Radio Club (1, 4); Wobblers (4).*

This native son of West Virginia came to us with many undeveloped characteristics. We always picture him with eyes half closed, picking out some Southern melody on the banjo. Cheer up, "Buzz", your talent can be used in comic opera, and Engineering as a side issue. We claim that he comes next to Trinks as a slide-rule artist.

SHINGO ICHIKURA. Age, 28. *Electrical Engineering*
Tokyo, Japan Mount Hermon School, Mt. Hermon, Mass.

A. I. E. E. (3, 4).

Our delegate from Japan. $\frac{1}{3} = ?$ Prof. Dennison says it can be found without a slide rule. Ichikura's Electrical World was printed with vector diagrams which even Prof. Dennison failed to understand.

TELESPHOR J. JENDRASIAK, Age, 22. *Electrical Engineering*
Buffalo, N. Y. Masten Park High School

Basketball Dorm 1 (4); A. I. E. E. (2, 3, 4); A. A. E. (4); New York State Club (1, 2, 3, 4); Dorm Governing Board (4).

"Telepathy", the man who made "Beans" famous. "Somebody's gonna get licked". "T. J." likes nothing better than to razz the Dorm Plebes. If an instructor hesitates in calling the roll, "Jen" answers "Here". He also maintains that the object of a hydraulic experiment is to keep dry.

R. NEAL JONES, Age, 25. *Electrical Engineering*
Johnsonburg, Pa. Johnsonburg High School

Woodlawn Club; Class Treasurer (3); Secretary A. I. E. E. (4); Radio Club (4).

"Jonsey" is another man who, like the cat, came back. In fact, "Fat" came back several times, having taken his college education in various doses, ranging from 1913 to the present—two years of which time he spent hurling pink ohms and barbed microfarads at the Germans.

RAYMOND DEXTER JUNKINS, Age, 25. *Power Plant Operation and Management*

Union City, Pa. Union City High School

A T; *A. I. E. E. (2, 3); C. S. M. E. (4); Radio (2); Aro (2, 3).*

Does anyone remember when Machinery Hall had no tower? Ask Junkins, he was a Plebe at that time, for even in Charlie Kurtz's there is no record of his coming here to school. He returns now, after a two-year trip in Europe, expenses paid, to receive the finishing touches in P. M. O.

ARTHUR JOHN KERR, Age, 22. *Mechanical Engineering*

Kittanning, Pa. Kittanning High School

Σ A E; T B Π; *Glee Club (3, 4); C. M. E. S. (2, 3, 4); "Tartan" (3).* "A. J." has been unanimously elected as the class fusser. He has spent quite a bit of time designing an adjustable engagement ring. It is not yet decided whether he is attending Tech, or P. C. W.

GEROLD V. KING, Age, 25. *Chemical Engineering*

Marion, Ohio Marion High School

Chemists' Club (2, 3, 4); East Dorm President (3); Dormitory Dance Committee (4); Buckeye Club (4).

G. V. stands for "Great Velocity". The only time he wasn't the first one through an Exam was the time he broke his pencil. Evening hours spent on Economics and the small bush that adorns his "hair lip."

IRVING N. KING, Age, 22. *Commercial Engineering*

Aspinwall, Pa. Aspinwall High School

Σ P; *Class Baseball (2); Class Basketball (2); "Puppet" Board (1, 4). Assistant Business Manager (2); Interfraternity Dance Committee (4); Commercial Club (3, 4); Quaker Club, Treasurer (4); Wobblers (3, 4); Fulcrum Club (2).*

"Kink" was popular on the *Puppet* staff, and is noted for his editions of the Christmas Calendar. He is the Beau Brummel of the class, and is one of the original Junior Commercials.

MYER KITAIF, AGE, 26. *Commercial Engineering*
PITTSFIELD, MASS. Albany High School

Φ E Π; *Quakers (2, 3, 4); New England Society (2, 3, 4); C. I. T. Debating Society (3); Commercial Club (3, 4).*

"Kitty" is the bird we want to sit next to in Spanish. We want to know why he expects mail three times a day. He is a broker, as he is always broke.

CARL LOUIS KNAAK, AGE, 23. *Machine Construction*
McDONALD, PA.

Tech Mechanics' Club (1, 2, 3).

Carl is one of those easy-going, quiet fellows whom everyone will miss when he leaves. When it comes to Mechanical Drawing he is right on the job. Some day he will enlighten the world with some novel invention—a spatterless egg-beater.

KENNETH K. KNAELL, AGE, 23. *Electrical Engineering*
MARS, PA. Mars High School

Σ A E; T B Π; *"Tartan" Staff (3); Senate (3); A. I. E. E. (2); Vice-Chairman (3), Chairman (4).*

One of Mar's Knaells, which we can see without Uncle John's aid. Knaell says to solve an A. C. problem, use all the data given, make three guesses, and use the last. It is rumored that "K. K." possesses a rare collection of books on Gynecology, the study of which is his hobby.

EDWARD VANLEER KRAMER, AGE, 21. *Machine Construction*
SUNBURY, PA. Bucknell University

Φ K Ψ; *Football Squad (1); Dorm Association (1, 2, 3); Tech Mechanics' Club (2, 3); Flynn's Backyard Stars (2, 3).*

The keeper now swings open the door and discloses in the adjoining cell no other than our old friend, Ed. Kramer. Delicately built, like a trench mortar, he is one of those fellows who can wear an alarm clock for a wrist watch and look well in it. Always ready for an "Honest Scrap".

ADRIAN BLOOM KREBS, Age 24. *Civil Engineering*
Williamsport, Md. Carnegie Institute of Technology, Division of Arts

Θ Ξ; *Southern Club; Cross Country (1, 2); Track (1, 2); Senior Civil Basketball.*

Some afternoon you can see the gang in the drafting room gathered around Krebs' desk, listening. Hist! what's up? Suddenly a burst of loud laughter, and then you will know that he has sprung his latest joke. He knows more funny stories than Abe Lincoln and Mark Twain put together. With a line like this he ought to land a pretty soft job.

RAYMOND LeROY KREIDLER. Age, 21. *Chemical Engineering*
York, Pa. York High School

Σ A E; *Glee Club (3, 4); Chemists' Club (2, 3, 4), Treasurer (3); Soph-Plebe Conduct Committee (2).*

"The Pennsylvania Dutchman". His innocent face gains him the added company of the girl's brother when he goes to a dance; consequently, he likes "Moonlight Waltzes". A member of "Science of Five Hundred" Club.

HARRY D. KRUMMELL, Age, 23. *Mechanical Engineering*
Pittsburgh, Pa. Central High School

Z A E; T B Π; *Cross Country Squad (2, 3); Mech. Football (3); Wrestling Team (2); Science Stag Committee (1); C. M. E. S. (2, 3, 4). Secretary (3). President (4); "Gear Groan" (3, 4); Member Mystic Seven.*

Hot dog, she runs! What? Why Andy's "Sheet Metal Elizabeth", of course! The Mystic Seven never walk—at least not when the tin chariot can boast of a supply of ye good olde B-Zol. Andy is *the* hustler for the Steel Works Gang. He is cheery, big-hearted and ready for anything.

FRANK I. LAWSON, Age, 25. *Electrical Engineering*
Minneapolis, Minn. North High School

Δ Υ; T B Π: *Track Team (2, 3); Cross Country (2, 3); Varsity Class Secretary (3); Science Senate (3).*

"Fi" has been a noteworthy student ever since his matriculation in 1914, and he has come back this year after two years in the army, full of the same old pep. Always active, he is back on the job with both feet. Liked by all. His particular hobby is to devise short-cut methods to eliminate surplus work.

RUSSELL KENNETH LEE, AGE, 22. *Metallurgical Engineering*
PLAINFIELD, N. J. North Plainfield High School

Σ P; T B Π; *Cross Country Squad (4); "Tartan" (2); Vice-President Interfraternity Council (3); Mining and Metallurgy Society (2, 3, 4); A. A. E. (4); Junior Member American Institute of Mining Engineers (4).*

We like to think of "Russ" or "R. K.", as he is better known, when he was a plebe, but we can't. He used to be shy and bashful and everything—but—well. Utah had its effect on him, and from all reports he's going back. Just a quiet chap, with common sense and a good head. Plainfield doesn't make them better.

N. F. LE JEUNE, AGE, 24. *Chemical Engineering*
DETROIT, MICH. Sandusky High School

Larry Frederick took a trip to Detroit, and now claims he's married. Ask him why he learned to skate and dance since coming to Tech. Pastime—verifying "Doc James's" data on coal.

SAMUEL S. LEVIN, AGE, 21. *Chemistry Science*
BALTIMORE, MD. Baltimore City College

Δ Π; *Chemical Club (2, 3, 4).*

"Sammy", the scientific wonder from "Baultemor". He has been a great help to Werner in writing up his valence theory. Sammy has also been prominent in Agricultural Engineering.

CHARLES KENNETH LITTLE, AGE, 26. *Commercial Engineering*
TOLEDO, OHIO Scott High School

Δ Υ; *Lawtochfrarie; Delta Skull; Dragon; Manager Track (3); Senate (4); Radio Club (1), President (2); Musical Clubs (4).*

"Casey" is a radio fiend, being one of the founders of the Radio Club. "He's gone, girls!" and we believe another good man has gone wrong. Was never on time for a roll-call—how did he get away with it?

L. EARL LORA, Age, 24. *General Equipment and Installation*
Salem, Ohio Augusta Military Academy

K Σ P; *Aro Club (1, 2, 3); Dormitory Association (1, 2, 3).*

"Buck" is noted for his week-end trips to Salem. Nobody has found out the reason for his frequent migrations, but rumors are around in numbers. "Buck" has probably had more pressing engagements than any man in school.

ROBERT F. LUNGER, Age. 22. *Mechanical Engineering*
Danville, Pa. Danville High School

Σ A E; *"Tartan" (2, 3, 4); C. M. E. S. (2, 3, 4); Wobblers (4).*

"Bob" is a very quiet, harmless, good-natured creature, manner mild as a tropical calm. He holds himself aloof from such corrupting temptations as wine, women and song. He is as slow and as sure as Prof. Estep. Bubbling over with dry humor and philosophy. "Still water flows deep".

PHILIP PENCE MARSHALL, Age, 24. *Civil Engineering*
Pittsburgh, Pa. Peabody High School

Σ N; *Lawtochfrarie; Delta Skull; Dragon; Football (1, 2, 3, 4), Captain (4); Senior Civil Basketball; President of Sophomore Class, 1916.*

"Remember the time when 'Phil' made that 93-yard run for a touchdown against Pitt, 'n' we nearly went wild, 'n' threw our hats, confetti, 'n' megaphones in the air, 'n' hugged each other?" "Oh, boy! you bet we do". "Phil" was the only Tech man to play against Pitt four times, and he sure got in the last time. Phil is a true Tech man, and here's wishing him many touchdowns in the long run of life.

THOMAS WILLIAM MASTERMAN, Age, 20. *Machine Construction*
Greigsville, N. Y. Greigsville High School

Tech Mechanics' Club (2, 3).

"Red" arrived here four years ago from Greigsville, and the first day got the roof of his mouth sunburned looking at the tower of Machinery Hall. A hero among the boys at home and an authority on life in a big city.

HAROLD ELLSWORTH MATEER, Age, 21. *Chemical Engineering*
St. Louis, Mo. Entered from Washington University, 1919.

Σ A E; *Chemists' Club (4).*

"Harold dear". When his folks come to Pittsburgh they call him up at "Forbes Hall". Claims Pittsburgh much drier than St. Louis, and by the speed of his Lab work, must believe he is still at Washington University.

JOSEPH P. McCURDY, Age, 22. *Metallurgical Engineering*
Piqua, Ohio Piqua High School

Band. (2, 3); Metallurgy Society (2, 3, 4); Buckeye Club (4); Musical Clubs (2, 3, 4); A. A. E.. Jr., member (4); A. I. M. E.. Jr., member (4); East Dorm Governing Board (3); Vice-President (4); Dorm Dance Committee (3, 4).

The Metallurgical gang tried to make Peter the goat of many jokes, but he seemed to bear them fairly well on his broad (??) shoulders. His chief hobby is dancing, and raving about a different girl every two weeks. Yie, Undergraduates, take a tip from "Mac"; he put one over in examinations on the profs by writing so that they could not read his writing and they usually gave him the benefit of the doubt. As a Metallurgist, "Mac" would make a good elevator man.

WAYNE S. McKEE, Age, 25. *Mechanical Engineering*
Butler, Pa. Butler High School

Σ A E; *Mechanical Football Team (3); Vice-President C. M. E. S. (3).*

Butler must be one fine town. Oh no, it isn't that, but we can guess. Anyhow, "Mickey" spent most of his time there, and what for—well, we can guess. You'd think he was very quiet and bashful, too, but we'll say that you don't know him. We do.

HOWARD EDISON MELANEY, Age, 25. *Machine Construction*
Pittsburgh, Pa. Peabody High School

Tech Mechanics' Club (2, 3).

"How" is one of the shining lights in the class. He was the critic for all the productions at the Sheridan Square during the last four years. Will be remmebered as the expert in Qual Lab.

JAMES D. MILLER, Age, 23. *Chemical Engineering*
Harrisburg, Pa. Harrisburg Technical High School

Track (4).

"Jim". Wanted—a position as a husband by a good, steady and sober man. An expert on chemical processes in Germantown, qualified shotputter and piano mover. He expects to be a coke-mover when he grows up.

JAMES LEDLIE MILLER, Age, 25. *Mechanical Engineering*
Wellsburg, W. Va. Wellsburg High School

Θ Ξ; Delta Skull; Dragon; Second Assistant Manager Basketball (2), First Assistant Manager (3); Manager Sophomore Hop Committee; Chairman Junior Prom Committee; Plebe Banquet Committee; M. E. Society; Mystic Seven.

"My size is no handicap", says Shorty, "I can wear boy's clothing and ride to New York for half fare". Note—Shorty's home is in West Virginia. If Shorty and Pop Staples were stockholders in the Jenkinson Stogie Company, they would be making each other rich. Shorty will soon be rich, however, if he puts the same pep into his work as he put into school activities.

RUSSELL KENNETH MONTGOMERY, Age, 25. *Civil Engineering*
Crafton, Pa. Crafton High School

C. E. Basketball (4); C. E. Baseball (2); Senior Civil Basketball; C. E. Society (2, 3, 4).

A quiet youth of few pretensions, seldom seen on the campus, but who does his work thoroughly and with understanding. Through his unassuming ways he has gained the respect of his classmates. He is always willing to help, and will without doubt quietly forge ahead. Was for two years with the Fifteenth Engineers.

JOHN HERBERT MOORE, Age, 22. *Industrial Education*
Pittsburgh, Pa. Fifth Avenue High School

President Teachers' Course (4); Secretary and Treasurer Teachers' Club (2), Teachers' Club (1, 2); Big Four (3); "Thistle" Board (3).

He believes there is safety in numbers. Watch yourself, John, this is leap year, and don't forget the H. C. L. He always says what he thinks. No good times go begging when he's around, for he's always got that laugh with him.

E. HOWARD PAFENBACH, Age, 23. *Metallurgical Engineering*
Pittsburgh, Pa. Peabody High School

Σ P; T B Π; *Dragan; Delta Skull; Lawtachfrarie; Class President (1); Banquet Committee (2); "Tartan" (2); Club Room Committee (2); Assistant Cheer Leader (2, 3); Freshman Regulations Committee (2); Chairman (4); P. T. Committee (3); Junior Prom Committee (3); Science Senate (2, 4); Student Branch of American Institute of Mining and Metallurgical Engineering (2, 3). President (4).*

"Pafe" is one of our most popular classmates. He is the only member of his class who has been elected to every honorary society in the school. It is rumored that he bit only once, and that was on an Indian turnip.

GEORGE McK. PAULSON, Age, 27. *Mechanical Engineering*
Pittsburgh, Pa. Alden Academy, Meadville, Pa.

Band (1, 2); Design School Orchestra (2); C. M. E. S. (2, 3, 4).

Here is one of the old reliables back in our midst again. He has had the job of getting re-acquainted with the Mechanicals, and he thinks we are some gang. We are! It comes handy in Lab to have a man in our midst who does some work.

ALFRED PAULUS, Age, 23. *Chemical Engineering*
Reading, Pa. Reading High School

I Σ Δ; *Chemists' Club (2, 3, 4), Treasurer (3); A. A. E. (4).*

"Al" or "Palace"—a dye shark, inasmuch as it took him one year to make "Malachite Green". A member of the Gob contingent, and has sailed on every barracks at the Great Lakes station.

WAYLAND ROBINSON PORTER, Age, 24. *Civil Engineering*
Amherst, Mass. Amherst High School

Senior Civil Basketball (4); C. E. Baseball (2); New England Club (1, 2, 3, 4); C. E. Society (2, 3, 4).

Here's to Porter, the jolly-faced, good-natured youth. Works to beat the band, but in spite of it is always cheerful and has a ready smile. He plays as hard as he works—you ought to see him play on the Senior Civil Basketball team; oi! oi! A steady man and dependable, who can do the work assigned to him.

LEOPOLD A. PROCH, Age, 22. *Machine Construction*
Terryville, Conn. Terryville High School

New England Club (1, 2, 3); Tech Mechanics' Club (1, 2, 3).

The foundry, oh yes, that's "Lapes" hobby. He did not even have a little wren in Pittsburgh, but, oh boy! those letters to Connecticut were written with such pains, and so frequently, too.

MASON A. ROGERS, Age, 21. *Chemical Engineering*
Niles, Mich. Albion College

Δ T Δ; *Chemists' Club (2, 3, 4).*

"Kid Mason", Prof. Stevens' left-hand man and coal crusher. His gold-teeth smile would win him any girl in Niles, Mich., but his innocent baby face bids Pittsburgh girls beware.

A. J. ROSENGARTH, Age, 21. *Chemical Engineering*
McKeesport, Pa. McKeesport High School

Chemists' Club (2, 3, 4).

"Rosie", "The McKeesport Tough", a member of the "Five Brothers" and a Pittsburgh wonder. Was seen once with a woman, but we think it was his brother's girl.

SHIZUO SASAKI, Age, 25. *Power Machine Operation*
Nagasaki, Japan Nagasaki High School

Aro Club (3); Cosmopolitan Club (3); Japanese Student Club (1).

"Sacky" from Nagasaki in the land of the rising sun, is a real Tech man. He says he came to Tech on a bet, but is glad he lost. His favorite pastime is showing visitors from the Far East around the Institute.

DAVID C. SAYLOR, Age, 24. *Mechanical Engineering*
Fallsington, Pa. Westchester Normal School

Σ A E; *Football Squad (2, 4); Secretary C. M. E. S. (3).*

"Dave", the toy submarine, is a nice little boy, not fat, but just pleasingly plump. Dave is a scholar and a man, the only Senior Mechanical on the football squad. He lets the profs get away with nothing. His favorite expression is "Whoa, hold on a minute, Professor, I don't believe that".

GEORGE F. SCHAEFER, Age, 22. *Chemical Engineering*
Ramsey, N. J. Ramsey High School

Chemists' Club (2, 3, 4).

"Schaff", our married man, and since his Trust, Honor and Obey Agreement, we conclude his heart was in his Work. A N. J. shipbuilder who gets Thistles from South America. As a chemist he is some little machinist.

WILBUR C. SEABRIGHT, Age, 23. *Metallurgical Engineering*
Martins Ferry, Ohio Martin's Ferry High School

Ξ Σ T; T B Π; A A N; *Sales Manager "Thistle", 1919 (3); Metallurgical and Mining Society (3, 4); Student Member American Association of Engineers (4); Junior Associate Member American Institute Mining Engineers (4).*

Better late than never. The day that "Duke" came to class on time we had a holiday. He especially enjoys sleeping in King George's lectures, but you can't blame him much. His long suit is "Whimsical Widows", and he is credited with introducing the "shimmie" in the Middle West.

JACOB SHAEFFER, Age, 23. *Chemical Engineering*
Pittsburgh, Pa. Peabody High School

"Jake" or "Natan", the longest line in the school; gets away with murder under any conditions of temperature and pressure. The "Nocturnal Wonder" claims he just has time to change clothes for the 8:30 class, but we know he gets twelve hours' sleep a night.

HERBERT M. SHELLENBARGER, Age, 26. *Machine Construction*
Hartville, Ohio Hartville High School

Musical Clubs (1, 2); Tech Mechanics' Club (1, 2, 3).

"Shelley", with the white hair and sunny smile. He carries them with him all the while. He's seldom gloomy, and never sad. Says life's too short to be feeling bad. A member of the crew on the "Constantine".

KUANG MI SHEN, Age, 24. *Metallurgical Engineering*
Peking, China Tsing Hua

Metallurgy and Mining Society (2, 3, 4); Cosmapolitan Club (2, 3, 4); Secretary Dormitory No. 6 (4).

Kuang Mi (Nee How) was one of our most readily-Americanized visitors from the Orient. His specialty was directing Chinese Glee Clubs, but he was a great lover of American music as well.

DAVE B. SHILLIDAY, Age, 24. *Commercial Engineering*
Pittsburgh, Pa. Peabody High School

Θ Ξ; *Class Football (3); Class Basketball (3); Class Baseball (3); Quakers (3, 4); Commercial Club (2, 3, 4); Tech Flying Club (4); Vice-President Quakers (4); Wobblers (3, 4); Fulcrum Club (4).*

Dave is one of the twin six, and the eternal question is, "Who are you, John or Dave?" Look for the mole. He is one of the original Commercials and a real highflyer. It is said that high-top shoes save socks.

LOUIS H. SIEGLER, Age, 22. *Mechanical Engineering*
New York, N. Y. Curtis High School

Φ E Π; *C. M. E. S. (2, 3, 4).*

Louis, hailing from Little Old New York, is always ready with a smile. He is a diligent student and one who has ever been loyal to his class. He's as sure as the seasons. "Sig" is liked by every one of his classmates.

CYRUS EDGAR SILLING, Age. 20. *Architecture*
Charleston, W. Va. Charleston High School

I Σ Δ; T Σ Δ; *T. A. C. (2, 3, 4); Student Activities Board (3, 4).*

"Cy", the boy wonder—Ellington is his satellite and Horny is his god. It must be awful to be endowed with such talent. "Hot dog—Teek it off". As a massier, he is always willing to answer all sorts of questions. Cy must be true to the Charleston belle or belles, for he has never been known to "step out" to any shindigs in Pittsburgh.

FABIAN R. STALEY, Age, 23. *Chemical Engineering*
Pittsburgh, Pa. Peabody High School

"Fabe", junior member of the Natan-Fabian firm. Manufacturers of Economic Extracts, etc., specializing in Embalming Fluid. Since he met "Jake" he hasn't been the same boy. The K. O. wonder of reexams.

JULIAN PRICE STAPLES, Age, 26. *Mechanical Engineering*
Richmond, Va. John Marshall High School

Θ Ξ; *Mystic Seven.*

"How much money is there in it?" In launching this laconic eulogy, it would be entirely fitting to relate that to his intimate friends this Southern gentleman is known as "Pop". That, indeed, is a genuine character study of "Stapes". His quiet, reserved exterior is but the true covering for the tranquil composure, the firm confidence, the sterling sincerity of the man underneath. A good man has left school.

CHARLES STARK, Age, 22. *Chemical Engineering*
Denver, Colo. East Denver High School

Φ E Π; *Section Football (1, 2); Chemists' Club (2, 3, 4).*

"Chops", chief massager of Carnegie Union. The Denver "Post" has been on the bum since he left. As the baby of the family, he has the family reputation to live up to. His grades show how smart he really is—or do they?

E. S. STOCKSLAGER. Age, 22. *Chemical Engineering*
Pittsburgh, Pa. Steel High School, Dayton. Ohio

Tennis (3, 4). Captain (4); Chemists' Club (2, 3, 4), Treasurer (4); Section Leader (4).

"Steve"—nobody knows what the "E" stands for, surely not "Early". Captain of the Tennis Team, and for that reason expects to play. Stockholder in the Rittenhouse and Hotel Yoder. Spends a lot of time around Design. His line—"When I was in the Navy", etc.

CONRAD AUGUST STONE, Age. 23. *Physics*
McKeesport, Pa. McKeesport High School

T B II: *Class Vice-President (2); Student Activities Baard (3, 4); Student Council (4); President C. G. S. Club (3, 4).*

Stone does not allow his school activities to distract his attention from McKeesport. His affinity for the home town is very marked. He is an industrious, business-like individual, whose merits are recognized by all. Good work in the past assures his future success in the science of Physics.

GRANT CECIL STONE, Age. 23. *Metallurgical Engineering*
Hamilton, Ontario Hamilton Collegiate Institute

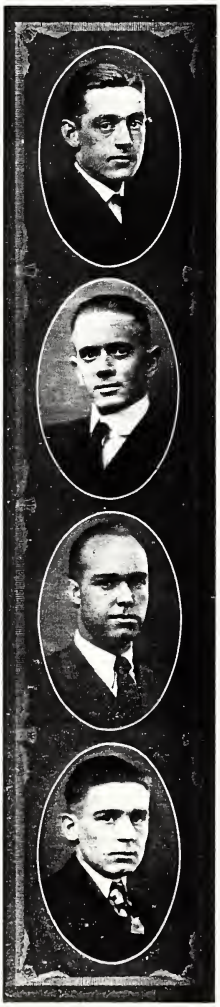
Σ N; *Lawtochfrarie; Delta Skull; Dragon; Baseball (1); Track, Penn Relays (3); Fraternity Basketball (3, 4); Sophamare Banquet Cammittee; Senate Vice-President (3); Senate President (4); Juniar Prom Committee (3); Metallurgical and Mining Society (3, 4); American Institute of Mining and Metallurgical Engineers (4); Four School Council (4); American Associatian af Engineers (4).*

He's a good fellow, and probably one of the most popular men in the school. Always ready to do his share in all of the school activities: a champion walker, who sticks close to Doc. Fettke on hikes. He hails from Canada, but claims that Chemistry is a product of the United States.

ALBERT NELSON STRATMOEN, Age, 27. *Metallurgical Engineering*
Boyd, Minn. State High School, Dawson, Minn.

President Metallurgical and Mining Society (3); Treasurer American Association of Engineers (4).

"Stratty", the metallurgist with the limonite shirt, came to Tech after a wide experience in the chemical and metallurgical field. Being an irregular, he took mostly Commercial Engineering subjects in his last year in order that he might have loads of time for fussing. He used the time to good advantage.



JOHN F. SWEENY, Jr., Age, 25. *Mechanical Engineering*
Pittsburgh, Pa. Shady Side Academy

Σ N; *Delta Skull; Dragon; Track Squad (1, 2, 3); Mech. Football Team; Musical Clubs. Secretary (1). President (3, 4); "Thistle" (3); C. M. E. S. Interfraternity Council; Mystic Seven.*

Meet our friend "Mike" Sweeny, called "Mike" because it goes well with Sweeny. Boy, but he ought to know a lot! he's been around here for eight years. No sooner graduates from one school than he enters another. It is rumored that he was head nurse to the Musical Club when it was in its infancy, and they say he gives mandolin lessons to Mr. Scalzo. He also draws fluent cartoons left-handishly, and can sing bass to "Amici" and "Dear Old Tech".

JOHN WALTER TOWNS, Age, 24. *Civil Engineering*
Keene, N. H. Keene High School

Ξ Σ Υ; T B Π; *Civil Baseball (2); Civil Basketball (4); New England Club (1, 2, 3, 4), President (3); Musical Clubs (2); C. E. S. (2, 3, 4), Vice-President (3); Section Leader (4); Choral Club (1, 2).*

Here we see a boy who could not fail on exams if he wished to. Study! Unheard of! We feel very highly complimented to have "Johnny" cast his lot with us after turning down every senior class since 1916. He is a good fellow, has worked hard and deserves a great deal of credit.

RICHARD EATON TOWNSEND, Age, 22. *Machine Construction*
Buffalo, N. Y. Buffalo Technical High School

A A N; A T; *New York State Club (1); Buffalo Club (1, 2, 3); Cosmopolitan Club (1, 3); Band (3); "Puppet" Staff (2, 3); Gobs Society (4); Dormitory Association (1, 3); Editor-in-Chief 1920 "Thistle".*

After running the excursion down to the W & J game, "Dick" took the school up and paraded it in Buffalo on the way to the Cornell game. As a member of the Band in '19, he was champion intercollegiate cymbal player of the U. S.

PHILLIP C. A. VETTER, Age, 22. *Civil Engineering*
McKeesport, Pa. McKeesport High School

Σ A E; T B Π; *C. E. Basketball (2, 3, 4); C. E. Football (2, 3); C. E. Society (2, 3, 4).*

What we want to know is how "Phil" ever got his "descript" done in his Soph Year, for we know darn' well that he never took his drawing board with him to the movies. Perhaps after being inspired by Theda Bara in six reels, "descript" comes easy! It does seem that way, but then Phil has a rep for being able to get his work quickly.

W. A. WALDER. Age, 21. *Chemical Engineering*
Cleveland, Ohio Central High School

A Π: *A. A. E.* (4); *Ohio Club* (4); *Chemists' Club* (4); *Glee Club* (4).

"Willie", a rosy-cheeked roly-poly, who dropped in on us from Case. When he left he took the "schmier" out of "Schmier-case". Quite some air-swatting pugilist—ask "Mike" Russel. Takes baths in Machinery Hall "Pool".

SAMUEL WEIS. Age, 23. *Commercial Engineering*
Carnegie, Pa. Carnegie High School

Φ E Π: *Plebe Basketball Squad* (1); *Interfraternity Basketball* (2, 3); *Fulcrum Club* (2); *Commercial Club* (3, 4); *Quaker* (4).

"Sam": his name was too big for a little fellow, so he changed Weishaskey to Weis. A regular patron at the Hotel Yoder. One of those Lefax artists.

LOUIS EDWARD WELCH. Age, 25. *Metallurgical Engineer*
Jackson, Mich. St. Mary's High School

Σ A E: *Class Treasurer* (3); *Glee Club* (3, 4); *Metallurgist and Miners Society* (3, 4); *Newman Club* (2, 3, 4), *President* (3); *American Association of Engineers* (4).

"Lomi" was champion sleeper of the class until Seabright came into the competition. Probably if he frequented West Park less than seven times a week, he could stay awake. Nevertheless, "Lomi" is the Boy Chemist and Geologist of the Metallurgists.

EDWARD WENDELS, Jr. Age, 24. *Machine Construction*
Brooklyn, N. Y. Bushwick High School

Band (2, 3); *Dirty Dozen* (1); *Federal Board Student; Dormitory Association* (1, 2, 3).

"Cocky" is reported to have a weak heart, but he can "natural" eight times straight without winking an eye. After graduating, he will go back to his old job of waking up the Statue of Liberty every morning.

LLOYD F. WENINGER, Age, . *Decoration*
Sandusky, Ohio Sandusky High School

Delta Skull; Glee Club (2, 3).

Absolutely the only Design student not interested in the female of the species. His system of filing and tabulation is the envy of the department. Illustrator, decorator, musical composer and director, scene painter, chronicler of Mars—his talents are so many and varied we wonder just what will become of him; but we are positive that whatever he does, will be done thoroughly and with "the fire".

GEORGE M. WHISLER, Age, 25. *Electrical Engineering*
Smithfield, W. Va. Wilmington High School, Wilmington, Del.
A. I. E. E. (3, 4).

George is another future streetcar motorman. A little Pittsburgh girl has so completely captured his heart that he is oblivious to the charms of all other girls. It is said that he crosses Dawson Street much more often than necessary. Favorite expression: "If we finish this experiment, we'll be late for the movies".

RALPH THEODORE WHITNEY, Age, 23. *Machine Construction*
Greigsville, N. Y. Greigsville High School

A T.

Fair laughs this man, captain of his hopes; doesn't care what happens, things will all come right in the end. After graduation, he is going back to Greigsville, and tell the boys about the city.

HAROLD A. WIELAND, Age, 24. *Architecture*
Duluth, Minn. Duluth Central High School

T Γ Φ; *Tech Architectural Club.*

A quiet young fella' from Duluth, who came bent on absorbing only Architecture, but it has been rumored that he has been seeking out the fair sex. But, be careful. "Dutel", it's difficult to mix the two.

ELMER LEWIS WYCOFF, Age. 22. *Mechanical Engineering*
Aliquippa, Pa. Aliquippa High School

C. M. E. S. (2, 3, 4).

The Mechanicals are honored by having another commuter in their midst. A common remark: "Hey, 'Griff', hadn't we better go if we want to catch that train?"

MATTHEW FERDINAND YELLE, Age. 23. *Mechanical Engineering*
Fitchburg, Mass. Fitchburg High School

Θ Ξ; *Dragon; Delta Skull; Manager Basketball (4); First Assistant Baseball Manager (3); C. M. E. S. (2, 4); Mech. Football Team (2); Mystic Seven.*

Mat has a grand "Idear" that he will take a P. G. course at Indiana Normal or Jeannette High School—Grape Nuts! there's a reason. He can be certain that he will not get neuralgia from studying too hard, and can probably fall asleep in class with safety.

HAROLD E. YOUNGK, Age. 24. *Architecture*
Wilkinsburg, Pa. Wilkinsburg High School

Tech Architectural Club; Glee Club (3).

Sometimes he smokes a stogie, but he looks more natural with a corncob. One of those young men who entered in 1914, but took time out to "travel in France". Now since he has become convinced of the fallacy of Art, he has become an "Option Hound".

HERBERT SPENCER YERGEY, Age. 23. *Building Construction*
Pottstown, Pa. Pottstown High School

Ophelcum; Building Construction Club Secretary (1), Vice-President (2); Cheer Leader, 1918, 1919, 1920.

All ready, boys! A Looo-Cooo-Mooo-Tive!! Let's Go!!! Our cheerleader "Hubby" was there rain or snow. Tech will sure miss him (the girls, too!). One, two, three years against Pitt, he showed up true blue.

SAMUEL B. SHEARER. Age. 24. *Heating and Ventilating*
Zanesville, Ohio

Opheleum; Buckeye Club Treasurer (3); Carnegie Tech Masonic Club; B. T. U. Club President (3); Building Construction Club.

Sam Ambition Shearer came to Tech with the Class of 1917, and was greeted by the denizens of Second Floor East, and started on the right track. He continued on the right path as is shown by his graduating with Class of '20 with a creditable record. However, Sam did not let B. T. U.'s interfere with pleasure, as his smiling face graced many Tech affairs. Best of luck to our future world's-famed heating and ventilating engineer.

HERMAN GOLDBERG, Age. 24. *Electrical Engineering*
Brooklyn, N. Y. Erasmus Hall

ΦΕΠ; *Track (3); A. I. E. E. (2, 3, 4).*

Originally from New York, but more recently from France. He is well versed on all phases of the French language. His translation of "Cognac" is "a soft, smooth drink".

S. J. ROCKWELL. Age, 25. *Architecture*
Uniontown, Pa. Uniontown High School

ΞΣΤ; *T. A. C.*

"Rock's" quiet and modest disposition has evidently proven impregnable to the vanities of Paris and the Kaiser's cohorts, for his "early to bed and early to rise" is as yet uninterrupted, as he is the first in the drafting room each morn.

ODIN F. HENRICKSEN. Age. 20. *Machine Construction*
San Juan, Porto Rico Commerce High School, New York City

Tech Mechanics' Club (2, 3); Cosmopolitan Club (3).

"Swede" from Porto Rico is the only real foreigner in the class. He says Havana is the greatest city in the world; what the attraction is we cannot guess. Noted for his lengthy discourses on "the Spanish type of beauty".

ANDREW L. RENNER, Jr., Age. 24. *Machine Construction*
Erie, Pa. Pittsburgh Academy

Band (1, 2); Design Orchestra (1); Cosmopolitan Club (2, 3); Tech Mechanics' Club (2, 3).

"Andy" is a real Tech man, and deserves all the credit in the world for completing his education under many difficulties. He thinks North East is the greatest place in the State, and his heart is there instead of in his work.

JOHN CARTER ROBINSON, Age. 25. *Industrial Education*
Pittsburgh, Pa. Fifth Avenue High School

A Π A; *Track Team (4); Teachers' Club (1); Teachers' Course (2, 3, 4).*

"Robbie" is credited with being the first negro officer in Field Artillery. He is the greatest little organizer in school. Steady always, yet full of fun. Taking basketball teams away from home is his hobby. He'll promote anything.

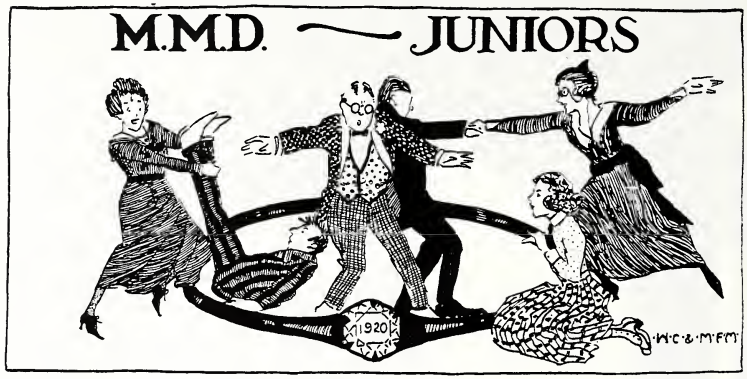
RALPH P. WOODWARD, Age. 22. *Building Construction*
Youngstown, Ohio South High School

Opheleum; Track Squad (1, 2, 3, 4); Plebe Basketball; Building Construction Club Secretary (2, 3); President Junior Class Division of Arts, 1918; Junior Prom Committee, 1918.

"Woody" is one of that Youngstown gang which was in power in 1916 and 1917. The temperament of Design School was too much for Ralph's constitution, so he switched. Generally can be found at Skibo or the Hotel Yoder.

J. J. HORST *Metallurgical Engineering*

"AND BLEST THE BUDDING SOUL GOES FORTH
TO MEET THE UNSEEN—PREPARED."
MARGARET MORRISON DIVISION



Junior Class History—M.M.D.

Three years ago we entered into the life at Margaret Morrison with a new spirit—that of being alive and awake every minute, ready to take our own part. We wore the hideous yellow arm band, the despised black stockings, we used only the left-hand stairway, we waited in a state of starved submission until twelve-fifty for our lunch, until Qualification Day when we banded together and helped make, as the upper-classmen called it, "the liveliest Qualification Day in the history of the school".

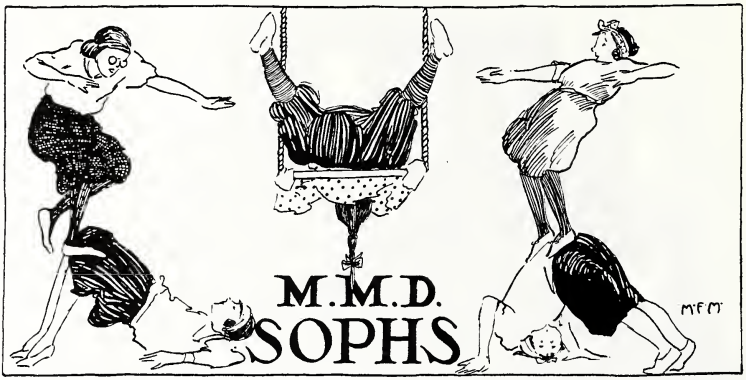
As Sophomores, we tried to keep this spirit of good sportsmanship and good feeling toward the Freshmen. At the same time we were teaching them their place in the school—how to stand aside for upper-classmen and to regard their arm bands as part of them, when all school work was brought to an abrupt standstill on account of the flu. Upon our return, we entertained our honorary class member, Dr. Julia Harrison, at tea, gave the Freshmen a dance, and finally gave the Soph Hop.

In the fall of 1919, we entered school as upper-classmen, our number slightly decreased, but still with the old spirit. The first thing we did was to give the Freshmen Class a tea in the faculty parlors to make them feel at home in their new school, and later we invited them to "a cabaret" in the gym. Of course, the big event of the year was the Prom, held March 5th, which certainly lived up to the good reputation all proms have.

Next year we shall be Seniors. Just think of it! As Freshmen we thought our chances of ever becoming Seniors were very slight, but upon our return to school in the fall, we shall have attained that exalted position at last!

OFFICERS

Eleanor McCarson	*President*
Lois McCombs	*Vice-President*
Mary Zarobsky	*Secretary*
Vivian Schmucker	*Treasurer*
Louise Irwin	*Social Chair*

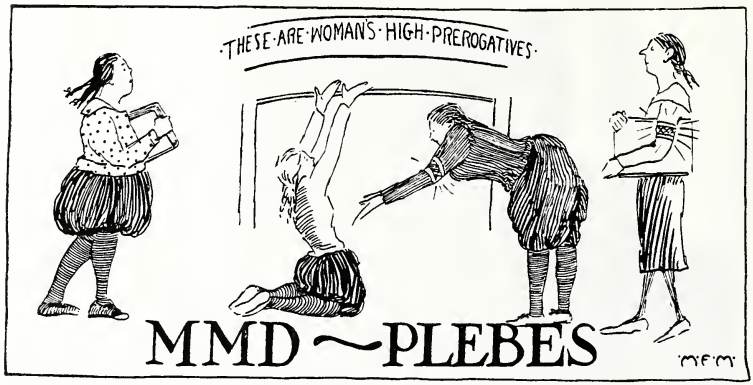


Sophomore Class History—M.M.D.

The 1922 Class woke the Margaret Morrison Division with surprise. When we first came in as tender Freshmen we obeyed all the little rules—and never thought of anything unusual. But that didn't last long. We got the class spirit and gave a dance just for ourselves, to see who we really were. Then an exchange of dances followed. Our Plebe girls made a good showing at the boys' dances, too. Our spirit was good—we think even the Sophomores of 1921 would have admitted that. And how we could play games! This fall, we played volley ball and beat '21 by a large score. And the class? The biggest and finest ever. Yes, we are proud of us—we Sophomores.

OFFICERS

Josephine Whitney	*President*
Mary Little	*Vice-President*
Gladys Bogue	*Secretary*
Anne Dougherty	*Treasurer*
Eleanor Foster	*Social Chair*



Freshman Class History—M.M.D.

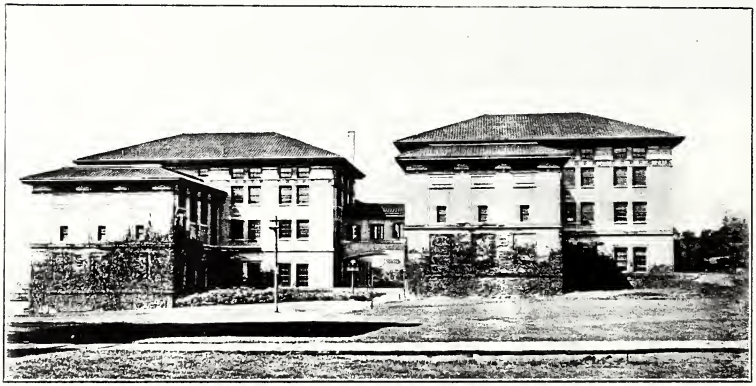
September 30, 1919, repeated the process of previous years and crowded the halls of Margaret Morrison with new faces and figures; not of much importance, these rather shy newcomers, merely Freshmen, but nevertheless the center of much attention, especially from Sophomores. After the first few hectic days, this attention subsided enough to let us draw an occasional quiet breath and become acquainted with our surroundings and our classmates. When the Sophomore-Plebe Dance "came off", we discovered that even Sophomores have their good side, and the Junior Party left us with a general feeling of good will for everyone.

In November, we organized and began to plan our reciprocal events. Organized, we felt stronger and fully able to take care of ourselves, although the atmosphere was still dangerous unless Plebe bands and cotton stockings were blatantly evident.

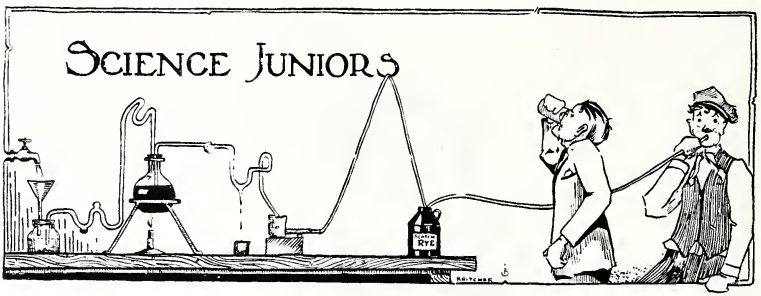
As we look toward the end of the year, while we can conceive of many things far worse than being a Freshman, still we thank whatever gods there be that all things, even Plebe Regulation, have their ending, and that some day we may enjoy the glorious privilege of being hungry before ten minutes of one.

OFFICERS

Katherine McDonald	*President*
Lillian Coleman	*Vice-President*
Lois Miller	*Secretary*
Jeanette Bickel	*Treasurer*
Eleanor Shomberg	*Social Chair*



SCIENCE



Junior Class History—Science

The Class of '21 came in with a bang and has been banging ever since. Its members were properly hazed and they submitted to it properly, but always showed their spirit by a friendly "come back", which might have proved unwise had it not been for the fact that the Sophomore Class was weak in numbers. The worst punishment which they received, however, was that of being compelled to pay for "Major Lyle's Office" which was burned down "by mistake" during a Plebe parade.

The Plebe Banquet was a complete success. It was held at "The Pines", so far from Pittsburgh that the Sophomores could not get there. Even the Plebes had some difficulty in finding the place.

During the year, the class started military drill on its own initiative and was responsible for the agitation which resulted in the establishment of the R. O. T. C. unit which was so very popular among the faculty, the general public and other disinterested persons during the latter half of the year.

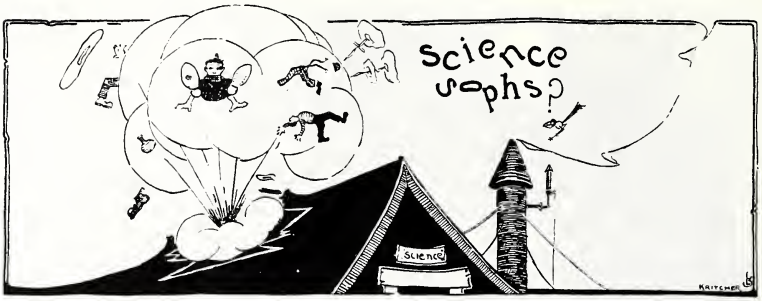
Many of the class went into the Service at the close of the year, and almost all of the remainder entered the S. A. T. C. in the fall of 1918. Having grown fat on the army diet of stew and more stew, the class returned to its Sophomore Year, still strong in numbers and in spirit. The first duty of the year, that of hazing the Plebes, was done with the gentle firmness characteristic of those who accept without question the old adage, "Spare the rod and spoil the child".

The Sophomore Banquet and Sophomore Hop were both managed without a slip, and even the Plebe Banquet was partially managed by the Sophomores. When things became dull during the second semester, the P. T. strike occurred and furnished several days of interesting discussion on the question of whether a cold rain is a shower.

Who's full of pep? Who's full of fun?
Who's got the rep of big things done?
It is the class
They can't surpass—
The loyal bunch of twenty-one!

OFFICERS

F. S. Bloom	*President*
C. B. Schmidt	*Vice-President*
P. Irwin	*Secretary*
H. G. Nichol	*Treasurer*



Sophomore Class History—Science

We first entered Tech under the S. A. T. C. administration, but after three short months, we gave up tin soldiering and became known officially as the Plebe Class. Our real organization, however, came at the Plebe Banquet which was held in spite of Soph protestations. This banquet is still remembered as a great success.

As Plebes, we were hazed, worked, and flunked as all good classes do. We entered into activities, both class and school, and continued the Tech traditions. In addition, we enlivened the wearying life of a Plebe with a Clean-up Day and a strike. Qualification Day saw us added to the Carnegie Clan as the Class of 1922.

When we came back this year, we found that the places of those who had not survived the Plebe Year were taken by men of former classes, lately returned from overseas. They were welcomed, and they added to the class the Tech pep and spirit of former years. Witness this year's banquet. From fear of ending our social career we will not admit in print that we were there, but should any wish first-hand descriptions, they are referred to Professor Trinks.

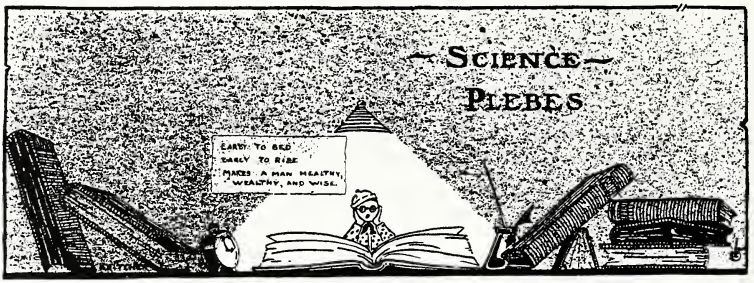
The good work started at the banquet has been kept up, and we find our class inaugurating the idea of a Soph Hop for all schools. As each day passes, we realize more fully that our duties to school and class do not end with attending classes. Rumors have said that our motto is "Come, little Joe", and "Oh, Min!" but for publication it is always given, "Our Best for Tech".

We feel that we are just entering on our years of greatest usefulness to Tech, and aside from the usual aspirations to remain in school and become Juniors some day, we all desire to see Tech on top, and to see our class become of greater value to Tech.

What the future has in store remains to be seen, but we are certain to be proud of having belonged to the Science Class of 1922.

OFFICERS

G. W. Curtis	*President*
H. D. Skyrm	*Vice-President*
R. L. Stevenson	*Secretary*
H. H. Wade	*Treasurer*



Freshman Class History—Science

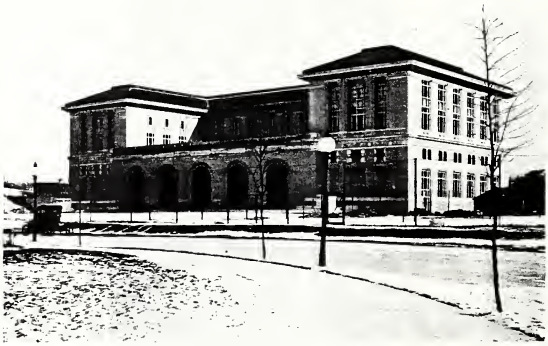
The campus of Tech, the first few days of October, 1919, was the scene of unusual and varied events. Large groups of woebegone individuals with coats on backwards and inside-out, wearing queer little caps, and trouser legs pulled up to display a black sock, were being marched over the campus by another group who all had paddles that were freely used. No, this was not a circus parade, merely the new Plebe Class, the hope of the school, being heartily welcomed at the portals of learning by their big-brotherly-acting Sophomores.

Early in the school year, a successful Plebe Smoker was held in the Gym. This was the first social get-together meeting of the class. After the first quarter exams, a dance was held in the Union, but the crowning event, the climax of the year, was the Plebe Banquet. It was a most wonderful affair. It is unfortunate that so many of the class had to leave us at the end of the first quarter. It seems to be a well-established custom here at Tech. Those of us who are left will carry-on, and prove our right to call ourselves Tech men.

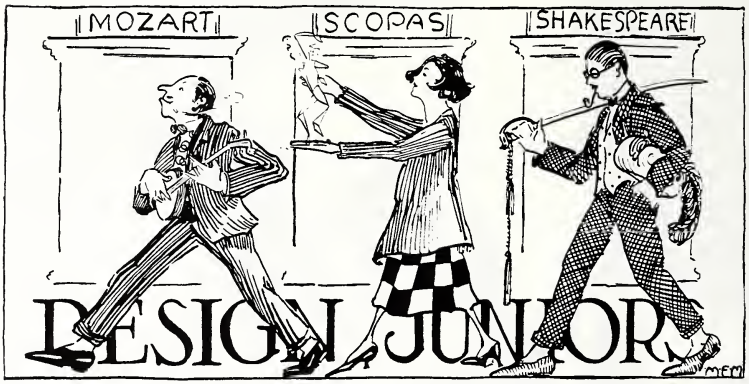
OFFICERS

G. F. Craighead	*President*
W. M. Cummins	*Vice-President*
Chester A. Emery	*Secretary*
Willard H. Roberts	*Treasurer*

TECH CAMPUS AND SCIENCE FIELDS



DIVISION OF THE ARTS



Junior Class History—Arts

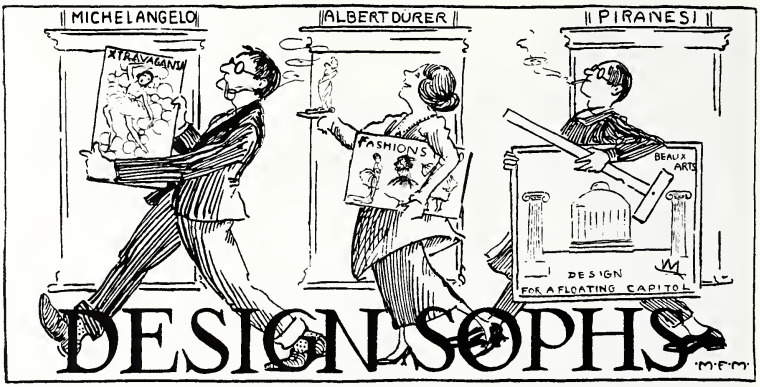
The gang, called the Class of 1921, began its noble and epoch career in September between 1915 and 1917. It doesn't make much difference which date is taken, the Juniors of the Class of 1921, Division of the Arts, have been the life of the school, encouraging the ole' time pep that was at one time so much in evidence. Who are we? Walk through the hall in front of the Dean's office at the lunch period—and see for yourself, but this happens to be our reconstruction period. Oh, but then one needn't stop with the class as far as Re's are concerned, ask any of them, they know.

Some of these raw-boned Juniors by the hand of fate, were members of the sect called Sophomorism, when some of us were meek and weak-kneed Plebes. Did we take our baths in the drafting room sink and submit to the flourishing tonsorial artist? Boy, can a fish swim? A fish cannot do anything else and get away with it, and neither could we. Nevertheless, we are still with you. Wilhelm has gotten his and we are indeed joyous to promenade the campus once again, Amen! This class, broken up as it has been, started off last fall with such a rush that it took the Design School by storm and swept it off its feet. Yea, verily, the marble seats in the main corridor are being slowly worn away. Last fall, the Juniors who have the privilege, as 'twere by virtue of being here two consecutive years, of greeting the old associates were much surprised by the wholesale return of Juniors of former years. Result—a combination of (censored) that during charette, one's hair simply refused to stay put in its much petted and coaxed part, but must stand on end. Ole' Dad himself says that the Wild West and its flock of Indians has loosed its mighty bonds.

Two or three stunts are in their infancy of planning, but the Juniors of the Immortal Class of 1921 are not going to be forgotten in a short time. One of these, according to the scriptures, the Prom, the Biggest of these events, will outclass in splendor and enthusiasm all previous Proms. For the remainder of the year, just watch our smoke! When you read this book, you will see that the graduating class of next year will be one that Tech can be duly proud to call her own.

OFFICERS

H. T. Aspinwall	*President*
J. G. Todd	*Vice-President*
Ellen Crowe	*Secretary*
B. H. Dierks	*Treasurer*
T. R. Hinkley	*Historian*



Sophomore Class History—Arts

We entered school when the Kaiser's armies were retreating from Paris for "strategic reasons". No, we were not typical Plebes; we were real Arts School students, for we were "different", from the start.

In proof of it we "sunk" several Seniors and all the Sophomores unlucky enough to be present. We were also the first Plebes to wear our caps "overseas style".

But in the meantime, our school work was not neglected. In a year of two quarters we succeeded in doing a full year's work; and only a few "fell by the wayside".

Mysterious Night and Fete Fantastique inoculated us with the real Arts School Bohemian spirit, and so we were ready to ascend to a higher plane.

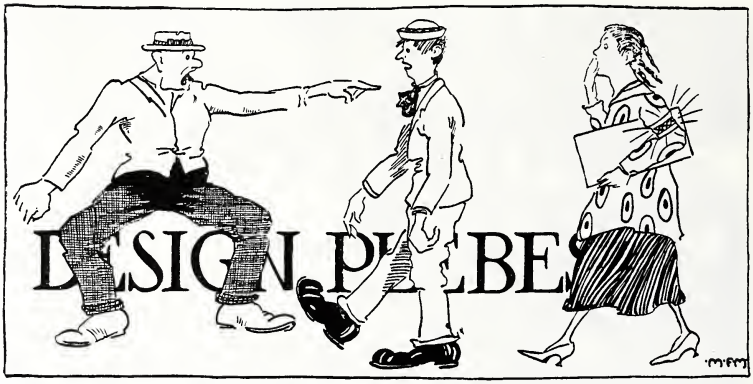
As Sophomores, we were reinforced by many returned overseas men, which made us strong enough to bring our "mailed fists" down with a thump on a large class of Plebes; so that they cringe at the mere sight of us.

Near the close of the first quarter, we gave a dance and invited all the classes and members of the faculty to attend. The dance, music, and the kick in the liquid refreshments were voted a success by all the guests.

Our history so far proves that we possess that element so necessary to true Techites; an element that is bound to carry us far, in a word, we possess pep.

OFFICERS

Everett Hughes	*President*
Albert A. Schoeff	*Vice-President*
Morton Winslow	*Secretary*
Aubrey W. Chesterman	*Treasurer*



Freshman Class History—Arts

Oh, boy! Remember when we first heard our footsteps clatterin' through those marble halls, an' how small an' useless we felt? An' the pained expression on the upper-classmen's faces when they looked us over, an' how scared we were? An' then when we had that "glad-to-know-you" dance, where we got acquainted with each other an' all the upper-classmen? An' what a good time we had at the Dean's party when we were expectin' to feel like California people in New York. An' how each class pulled off a stunt at the party? An' the way we worked in secret to get our stunt ready? An' when we pulled it, 'member how we nearly knocked the bunch cold an' made 'em think for a minute we weren't as dumb as we looked?

An' 'member, folks, how we worked for weeks an' weeks on the extravaganza? An' how the whole darn' class was in the theatrical business? An' while we were workin' on the show, 'member how the upper-classmen nearly died of anxiety, waitin' for us to throw 'em a dance? An' how they wouldn't believe we were busy? An' how wrong they were? An' then, folks, 'member when the big show was over and we had a chance to breathe again? An' how, just when the upper-classmen were thinking we were dead from the neck up, we sneaked up on 'em an' gave them a real dance?

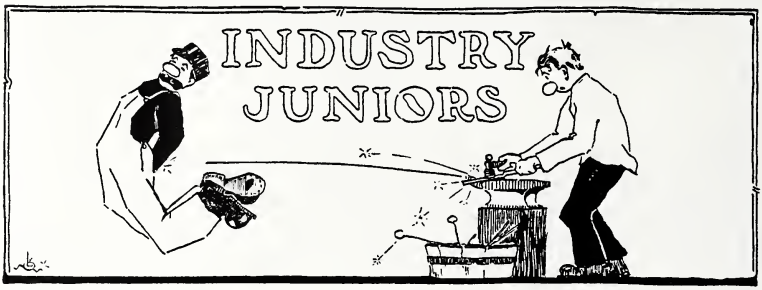
An', gosh! 'member the time when the U. C. M. (upper-classmen) waited 'til we had forgotten all about Plebe Regulations? An' then how they lined up an' inspected us an' romped all over us? An' 'member the pig-tails and braids on the girls? An' the blushes on their cheeks? An', oh, boy! 'member the unprivate individual bathin' parties on the beach by the sink in the Architects' room? An' how every once in a while one of us fellers got invited to one of 'em? An' how each niche in the corridor held a hunk o' sufferin' humanity who forgot about the regulations?

REMEMBER ALL THIS? THEM WAS THE HAPPY DAYS! ! !
(With apologies to "Casey".—)

OFFICERS

J. A. Willard	*President*
Ross Hartz	*Vice-President*
Miss Cunningham	*Secretary*
J. R. Franklin	*Treasurer*

INDUSTRY



Junior Class History—Industries

After gazing longingly for a period of two years and at the same time striving and pushing ahead with a certain determination of earnestness, we finally reached the lower strata, as it were, of upper-classmenship. Realizing our dignity, we learned to look on others in a different light, and readily saw that we were not a faction striving for self gain, but instead, formed only a part of a larger machine. So throughout the year instead of using our surplus energy for class distinction and class glory, we began to turn this material over to Dear Old Tech.

Upon completing the custom of setting the incoming Freshmen firmly upon their feet and getting them organized and established, we ourselves started right in, by assuming our share of duties and responsibilities about the campus. We contributed our share of material to all athletics and other activities about school.

Basketball, track and baseball occupied the attention of men, and those who two years ago formed the squad on the bench (the scrubs), now took the place of the regulars who were lost by graduation.

From the delights of home and our summer jobs, October days once more called our attention; and with the most virtuous resolutions for the coming term we packed up and prepared for mobilization in the Union where the favorite song was "Give me your name, twenty-five dollars and here is your green slip; pass on and I will see you later". The harrowing memories of the night before the fatal day, and the five minutes before the train pulled out are still with us; yet it was good to see Tom, Dick, and Harry again and to swap experiences with such additions and modifications as the occasion seemed to warrant.

As for ourselves, we have spent two quiet, sober and industrious years. Our dignity and peace have been unimpaired at Tech, surrounded by our beloved books, kind, generous professors, the delights of the Maggie Murphs, the wonderful beauties with which Nature has endowed this part of North America, and letters from home and someone else, what more could the heart of man desire?

OFFICERS

H. C. Hammann	*President*
James J. Rudisill	*Vice-President*
W. D. Hall	*Treasurer*
P. D. Good	*Secretary*

Sophomore Class History—Industries

It was in the month of January, 1919, when the Class of 1922 made its appearance on Tech campus, every member with high hopes of victories in and out of school, but why dwell on a description of our entry into Tech life? It is sufficient to say, in things pertaining to Tech and her traditions, we were willing, and can say with some pride, able students.

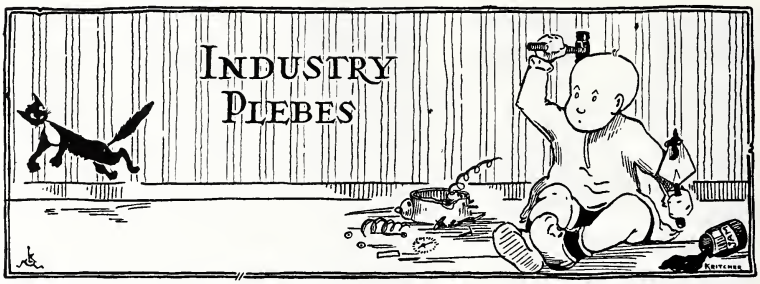
Owing to the reconstruction period, we did not suffer so many indignities as did our predecessors, but our records as students and our interests in various activities bid fair to rival, if not equal and surpass the best that has gone before us.

Now we are Sophomores—our importance on Registration Day knew no bounds; still this did not deter our ideas of being good sports toward our inferiors. After the traditional smoker in the Union, this spirit was increased, for good—for worse—but the numerous hair-cutting parties have drowned this poor spirit to some extent. They now know the purpose of Plebe caps, Regulations, and various other things which combine to make them better Tech men.

We believe we have kept alive Tech spirit, and our hope is that we may be able to further her best interests.

OFFICERS

August W. Kann	*President*
John E. Chick	*Vice-President*
Felix A. Crothers	*Secretary*
Harold C. Godden	*Treasurer*

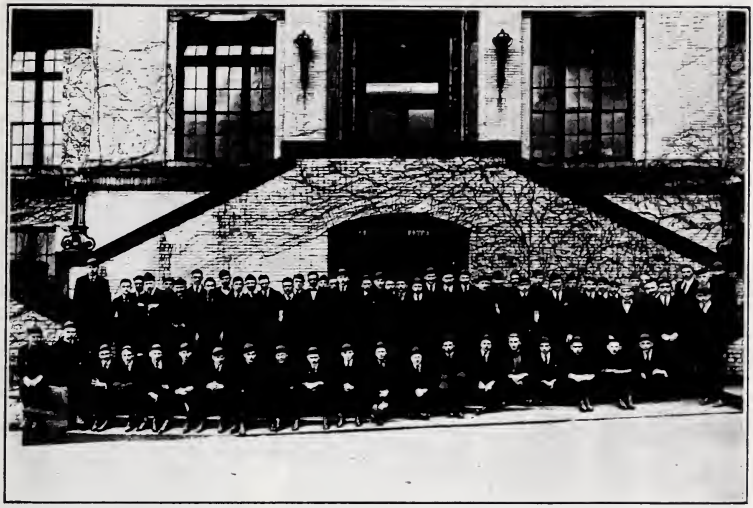


Freshman Class History—Industries

There were many changes this year in Industries that directly affected the Freshman Class. But in spite of these many changes, our friends the Sophs were in no way affected. They were just as tyrannical and harsh as ever before. Their first treat was to show us the sights which they deemed important for us to see. With our citizen uniforms re-designed, arranged in Indian-file formation, and using the Sing Sing lock-step, we started on our sight-seeing trip. Our first encounter was with the damsels of Forbes Hall. Sure enough, Cupid was right on the job. In less than five minutes, two of our brother Freshies were "hitched up". We next visited the Woolworth Store in East Liberty, letting the clerks know in a very audible manner just where we were from. Finally, we visited the Peabody High School, where we received a very (luke) warm reception.

After this grand parading we were not at all reserved in calling the Sophs every name under the sun, but one day we heard the following announcement: "A smoker will be given next Saturday by the Sophomores in honor of the Freshmen". This made us take back everything we ever said against the Sophs. And say, did we eat, drink and smoke? I'll say we did! We could do nothing else but show our appreciation for this treat; consequently, we tendered an unrivaled dance in honor of the Sophomores, which we believe they will never forget.

As the year passed by, we suffered greatly, endured all boldly—but watch us next year.

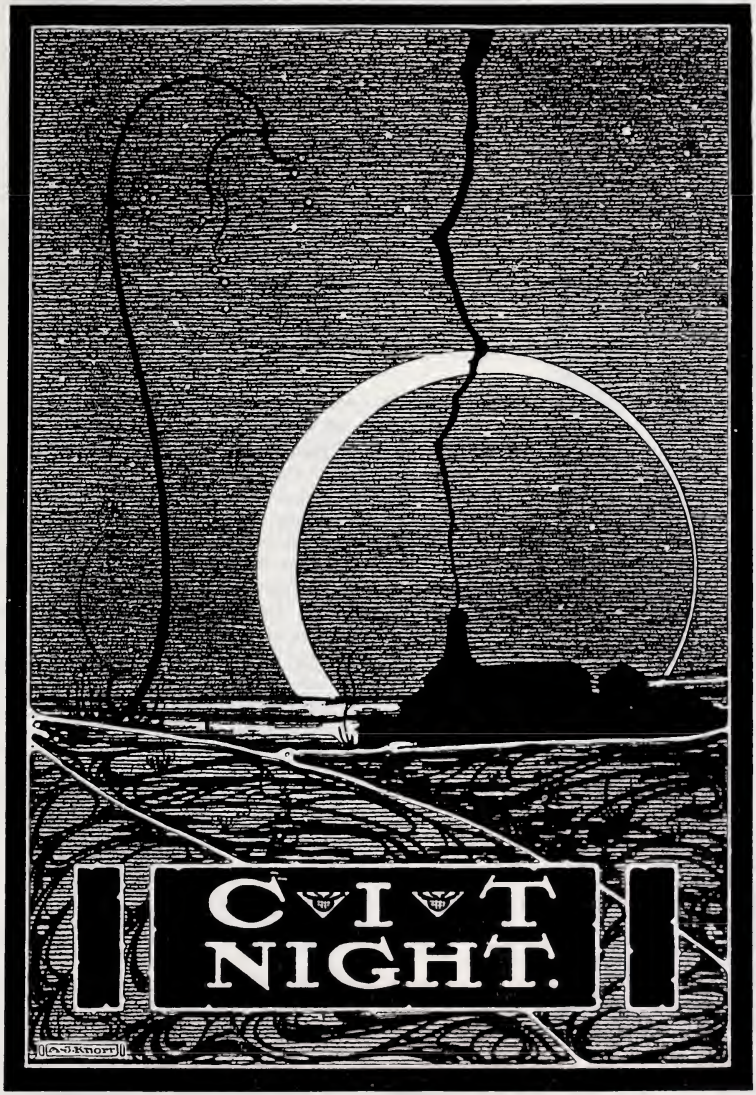


OFFICERS

S. P. Smith	*President*
C. A. Carr	*Vice-President*
C. W. Bunting	*Secretary*
J. B. Mays	*Treasurer*

Federal Board Students

The United States Government has established at Tech a school for men disabled in the Service during the war with Germany. The men are privileged to choose the work in which they wish to specialize, and they receive the same instruction as the regular classes. In this way the government attempts to express its gratitude for the heroic services which these men gave to their country. Most of the government students are taking courses in the Division of Industries, but they also are well represented in the other divisions of the Institute. While they have no separate class organization, they most certainly deserve this recognition in the Year Book.


CIT
NIGHT.
A.J. Knorr

Senior Class History—Night

A long, hard journey draws to a close; we view the approach of the end with a feeling of elation, commingled with regret, for we realize that our paths will probably lie in diverse ways.

But a few of the three hundred who started six years ago are left, but the friendships of the few are such as are seldom formed. May they last forever.

To those who have fallen back, but are still on the road, we offer encouragement and a helping hand. For those who fell by the wayside from lack of will power, we grieve; may they mend their ways. With those who were compelled to quit by reason of health or other unavoidable causes, we sympathize; may their future be bright. With those who have left us at the call of commercial advancement, we rejoice; may success be theirs. And for those who have been called to the "great beyond", we mourn; may their virtues live forever.

We are about to lay aside our textbooks, and with the knowledge obtained at Tech, continue the great fray in which all night men are veterans. Whether or not the final outcome of this contest be affected by the technical knowledge acquired at school, our lives cannot help but be fuller, freer, broader and bigger, because of the experience gained and friendships formed.

To our beloved late Founder, and to the Board of Trustees, we wish to express our thanks for the opportunity offered us. And for the members of the Faculties who have shown such a wonderful interest in us, and willingness to help us, we have a gratitude which words fail to express.

MERLE ROBISON.

OLEN E. BEE, Age, 29 — *Electrical Engineering*
Pittsburgh, Pa. — New Kensington High School

Thistle Board (4); Class President (5).

How doth the busy "Bee?" Although a man of many letters (patent), he passes with only one for a name. This Dodge owning class president originally thrived in New Kensington, where he astonished the natives with his skill in athletics and checkers.

HARRY A. BELL, Age, 21 — *Mechanical Drafting*
Pittsburgh, Pa.

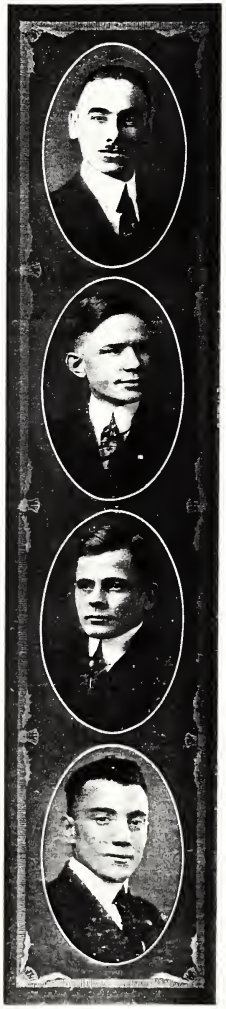
"Bell" can certainly throw the mud in the foundry, and in physics lab he's a bear. If he is as popular in society as here at Tech, he is some he-vampire.

CHARLES H. COOK — *Chemical Engineering*
Pittsburgh, Pa.

Cook's specialty is somnambulism, sometimes carrying his practice into the classroom. Aside from this, Cook is known for his stick-to-it-tiveness and his propensity for cooking up wind-concoctions—ask Grobstein.

W. R. DICKSON — *Mechanical Drafting*
Pittsburgh, Pa. — Peabody High School

"Dick" works math all day and gets paid for it, but cannot see any sense in the theories advanced by Mr. King.



JAMES E. DOBSON, AGE, 24 — *Mechanical Engineering*

MUNHALL, PA.

Student Activities Board (4.5); Class Secretary (5).

"Jim", always boosting the morale, and fighting for our rights. He is a living example of the kinetic theory of matter—that all particles are in motion. He has caused us to change our opinion of Homestead. The fellow who talks in a steady line by jerks.

FRED H. FANNING, AGE, 27 — *Mechanical Engineering*

PITTSBURGH, PA.

THISTLE Board (5).

This young man has the unique idea of applying the science of engineering to a plow. If he plugs as hard on the ultimate farm as he did in college, he is sure to have three crops a year.

VIVIAN P. GRIFFIN, AGE, 28 — *Mechanical Engineering*

PITTSBURGH, PA.

"V. P." may stand for "volume and pressure" or for "very prosaic" and still apply to "Griff". Still waters run deep; great bodies move slowly; and you just barely see "Griff" move. Figure it out for yourself.

ALBERT GROBSTEIN, AGE, 24 — *Metallurgical Engineering*

PITTSBURGH, PA.

That energetic mass you see bounding over the campus in the evenings is "Groby" on a still hunt for pie. Being a metallurgist, you would expect him to have an iron constitution, but not so—he falls the same as the rest.

CHARLES F. HOULIHAN, AGE, 36 — *Civil Engineering*
PITTSBURGH, PA. — Fifth Avenue High

Class Treasurer (2); Vice-President of Civil Engineer's Society (3).

"Hooley" is distinguished as being the oldest man in the class, but if a man is only as old as he feels, "Charlie" should be wearing short trousers. He is closely affiliated with some of those Hawaiian medleys.

EPHRIAM KUFF, AGE, 21 — *Electrical Engineering*
BALTIMORE, MD. — Baltimore Polytechnic Institute

"Kuff" is really a "caller" when the fair sex are involved. This fellow with the toothbrush lip hails from Baltimore, and he expects to return to the land of the oyster, some day.

FREDERICK A. LIND, AGE, 23 — *Electrical Engineering*
EAST MCKEESPORT, PA.

Class Vice-President (3).

"Fred" is another man of letters, being the youngest patent attorney with the Westinghouse Company. Ever since his office-boy days he has exhibited untiring perseverance, and now he has a law course scheduled to follow as a demi-tasse to his engineering work.

RALPH J. MILLS, AGE, 34 — *Chemistry*
BRADDOCK, PA. — Braddock High School

Mills is one of our future steel magnates, and he is going to give the school a new gym, some day. "Ask me a question about armorplate".

AUGUST L. NELSON, Age, 22 — *Structural Design*
Erie, Pa. — Erie High School

August seems to like Tech. After he was graduated in the day school, he came back for more at night. He must collect sheepskins.

MERLE ROBISON, Age, 28 — *Electrical Engineering*
Pittsburgh, Pa.

Class Vice-President (4); Historian (5).

"Robby", the blackbird of the class, is "sum burd". His two-watt meter method of measuring power will revolutionize the lab work. In this connection he is accused of being two-phased.

OCTAVE SCHNURER, Age, 22 — *Mechanical Drafting*
Paris, France

"Scooner" came all the way from France to go to Tech. He is popular with all, but we do wish he would dance Home Waltzes with his own girl—that is an American custom.

ALBERT D. SHEERE, Age, 25 — *Metallurgical Engineering*
Wilkinsburgh, Pa. — Wilkinsburgh High School

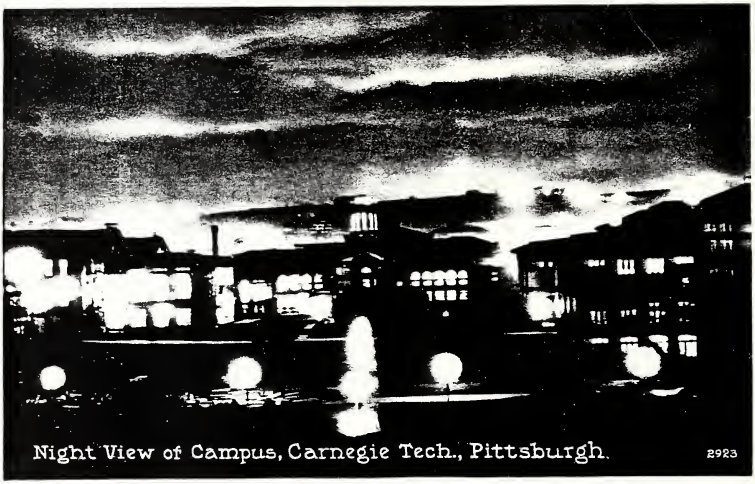
"Oh, Sheeres, let's cut up!" This shining light of Wilkinsburgh is a favorite with the ladies. "Red" is the congenial sort always welcome anywhere at anytime.

LOUIS A. SOXMAN, AGE, 21 *Structural Design*
PITTSBURGH, PA.

"Louie" isn't afraid of getting his hands dirty and is going to be a credit to Tech in a few years. He would get our buildings up on time if he had the contract.

WILLIAM ROY WICKERHAM, AGE, 27 *Electrical Engineering*
MONONGAHELA, PA. Monongahela High School

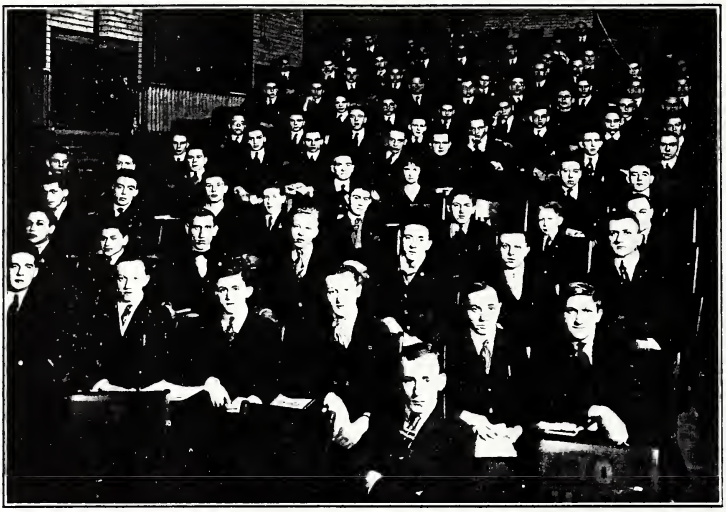
"Wick", otherwise known as "Sir Walter Raleigh", migrated here from Monongahela on a two-wheeled steed. Although he denies it, witnesses claim that he once scattered young ladies in football fashion that he might catch a car.



SCIENCE

SCHOOL OFFICERS—ARTS

ARTS



INDUSTRIES

INDUSTRIES

CAMPUS COMICS

YOURSELF AS YOU MAY LOOK TO OTHERS — SPIDER

THIS IS SHARK. HE FEELS SURE TAU BETA PI WILL HAVE GREATER PRIESTAGE WHEN HE WEARS THE KEY. WHAT DO YOU THINK, SHARK WANTS TO ORGANIZE A STRONG CHESS TEAM AT TECH TO PLAY COLLEGES LIKE HARVAUD. —

OF COURSE YOU'VE MET SHARK OF OAKLAND. ——

HERES THAT ROUGH BIRD - SAID HE WOULDNT OBEY PLEDGE RULES. KID STUFF TO HIM. USED TO WORK FOR THE D&O CAME TO TECH TO LEARN CIVIL ENGINEERING. GRADUATED IN ONE WEEK WITH A BLACK EYE AND A TECH HAIRCUT BY THE SOPHS

ISNT HE THE BIG STRONG MAN THOUGH - HE IS JUST SIMPLY WONDERFUL WHEN HE PLAYS FOOTBALL - AND BRAVE - WHY HE DONT MIND GETTING HURT A BIT - BUT HES SO BASHFUL WHY HE WONT EVEN LOOK AT ONE OF THE COEDS ——

OH GIRLS! HERES GEORGE ISNT HE THE HANDSOME BRUTE THOUGH? HE BELONGS TO ONE OF THOSE FRATS - I THINK HE TOLD ME IT WAS TAPPA - NU KEG. HE'S AN ARCHITECT - SOMETIMES HE HAS TO STUDY ALL NIGHT SO HE GOES TO LOTS OF DANCES TO GET USED TO THE LATE HOURS. ——

YOU KNOW CARROL HE SINGS IN THE GLEE CLUB. ISNT HE FINE LOOKING IN THE SOUP & FISH OUTFIT? HE GOT TERRIBLY — YES JUST AWFUL MAD WHEN ONE OF THE FELLOWS TOLD HIM HE LOOKED SO SWELL HE OUGHT TO BUY THE THING —

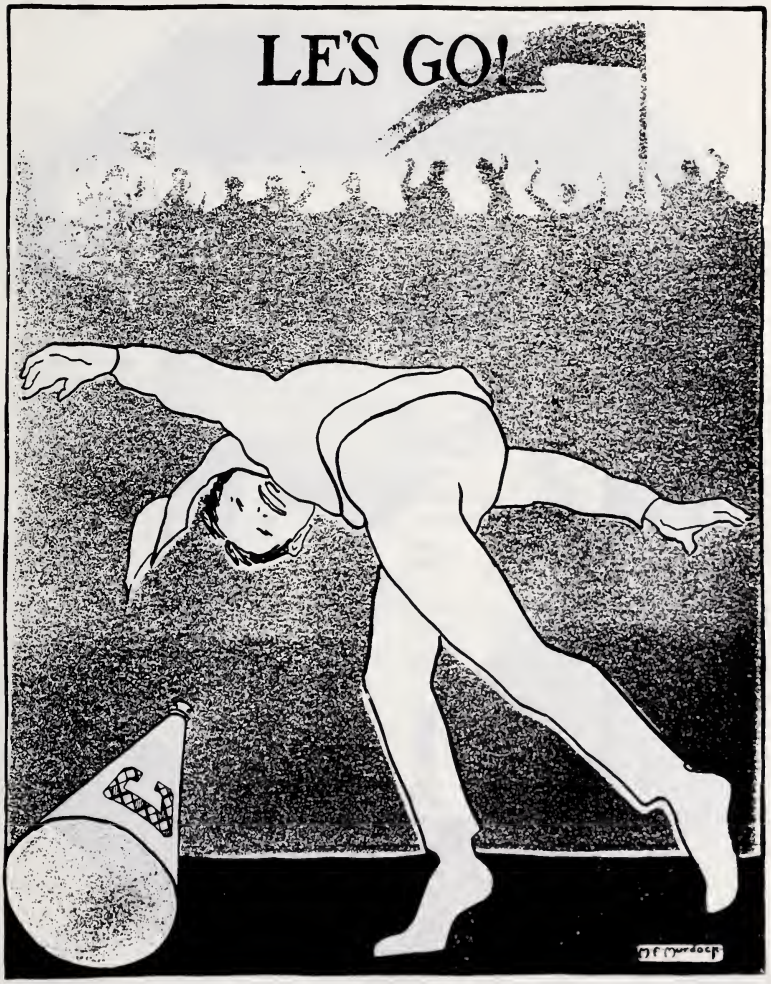
THIS AS YOU HAVE ALREADY (?) GUESSED IS THE MATINEE IDOL OF THE DRAMA DPT. HE WILL BE A GREAT WESTERN ACTOR SOME DAY AS HE IS NATURALLY FITTED FOR THAT VIRIL, OUT OF DOORS, ROUGH & READY HARD GUY STUFF. ——

OH THERES THAT HORRID FRESH FLIRT FROM THE PSYCHOLOGY DPT. HE COMES SMOOCHING AROUND EVERY DAY. A TERRIBLE BORE WE THINK. THEY SAY HAMMY THINKS HE'S CLEVER. HE MUST BE FOR HE'S GOT THE WHOLE SCHOOL BUFFALOED WITH HIS LINE —

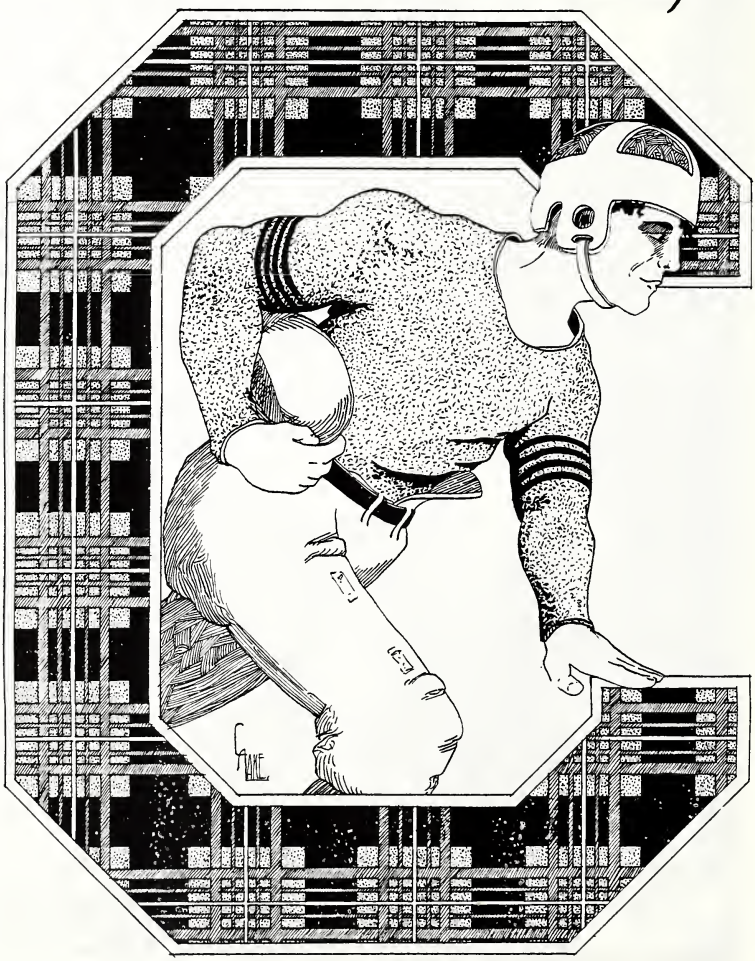
JUST LOOK AT RAYMOND! YOU KNOW HES JUST TOO FUNNY FOR ANYTHING. HOW ON EARTH CAN HE THINK OF ALL THOSE FUNNY JOKES ABOUT THE BEANERY. HE MUST BE A BORN HUMORIST WHY HE EVEN LAUGHS WHEN HE FLUNKS ITL SOON BE HYSTERICS

HA-HA

ATHLETICS



Wearers of the



Wearers of the "C"

FOOTBALL 1919

Phillip P. Marshall, *Captain*, '20
Harold C. Godden, *Captain-Elect*, '22
Thomas J. Loomis, '23
J. S. Baldwin, '20
A. E. Fletcher, '23
H. G. Wittmer, '23
S. Williams, '21
Milton S. Roth, '22
Alfred Irwin, '23
Harold J. McClean, '23
D. J. Moon, '23
Abe Levy, '21
Roger Marshall, '23
E. G. Hayes, '23
Willard Roberts, '23
Homer F. Carey, '20
H. C. Henderson, '21
E. G. Flannery, '23
George W. Curtis, '22

TRACK 1919

Clarence B. Schmidt, *Captain*, '21
C. Kenneth Little, *Manager*, '20
P. Sacks, '19
George Ellerton, Jr., '19
E. J. Davidson, Jr., '19
M. S. Gare, '21
H. Petry, '22
M. L. Smith, '21
J. J. Juergens, '19
R. M. Russell, '21
F. A. Faville, '19
H. A. Miller, '21
E. M. Stultz, '22
H. C. Hammann, '21

TENNIS 1919

John D. Beatty, *Captain*, '20
Francis J. Nuttall, *Manager*, '19
E. S. Stockslager, *Captain-Elect*, '20
J. C. Harkness, '21
C. J. Copley, '22
D. B. Gawthrop, '20

BASEBALL 1919

M. Edward Gretzler, *Captain*, '19
John R. Gaugler, *Manager*, '19
Holmes W. Lynn, *Captain-Elect*, '21
David H. Abrams, '20
James A. Gates, '19
Raymond J. Gannon, '19
Charles O. Hoban, '19
Elmer F. Weiss, '22
Harold C. Godden, '22
Edward S. Lundell, '20

CROSS COUNTRY 1919

Marshall Stearns Gare, *Captain*, '21
Harvey R. Hiller, '21
Thomas McDonald, '23
W. M. Cavett, '23
N. H. Greenlaw, '23
Donald W. DuVall, '21
C. D. Miller, '23
W. L. Wilson, '22

The Athletic Board of Control

DR. WM. L. MARKS . . . . . *General Supervisor*
DEAN A. W. TARBELL . . . . . *Administration Supervisor*

OFFICERS

H. C. HAMMANN . . . . . *President*
R. W. SCHMERTZ . . . . . *Secretary*
C. B. SCHMIDT . . . . . *Treasurer*

UNDERGRADUATE MEMBER

C. A. MCDADE

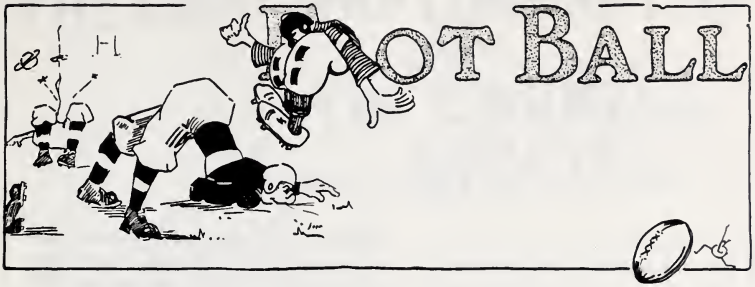
ALUMNI MEMBERS

E. T. MERRILL H. ZEHFUSS

The Athletic Board of Control supervises the entire athletic program and policy of the school. It is composed of one representative of each day school, one representative from each Alumni Association, the Graduate Manager, Supervisor and Treasurer.

Each member is elected by his body and serves for two years. The under-classmen must be Juniors.

"DOC" MARKS, General Supervisor of Athletics, is one of the most popular Faculty members. His duties as Resident Physician bring him in contact with many men; and as head of the Athletic Board of Control, he has wrought changes in policy which insure strong representative teams.



SUMMARY

Date	Opponents	Tech	Opponents	Place
Oct. 4	Bethany	33	0	At Home
Oct. 11	W. & J.	0	20	Washington, Pa.
Oct. 18	Case	16	0	At Home
Oct. 25	Lehigh	0	16	At Home
Nov. 1	Allegheny	9	0	At Home
Nov. 8	Cornell	0	20	Ithaca, N. Y.
Nov. 22	Pitt	7	17	Forbes Field
		65	73	

Football 1919

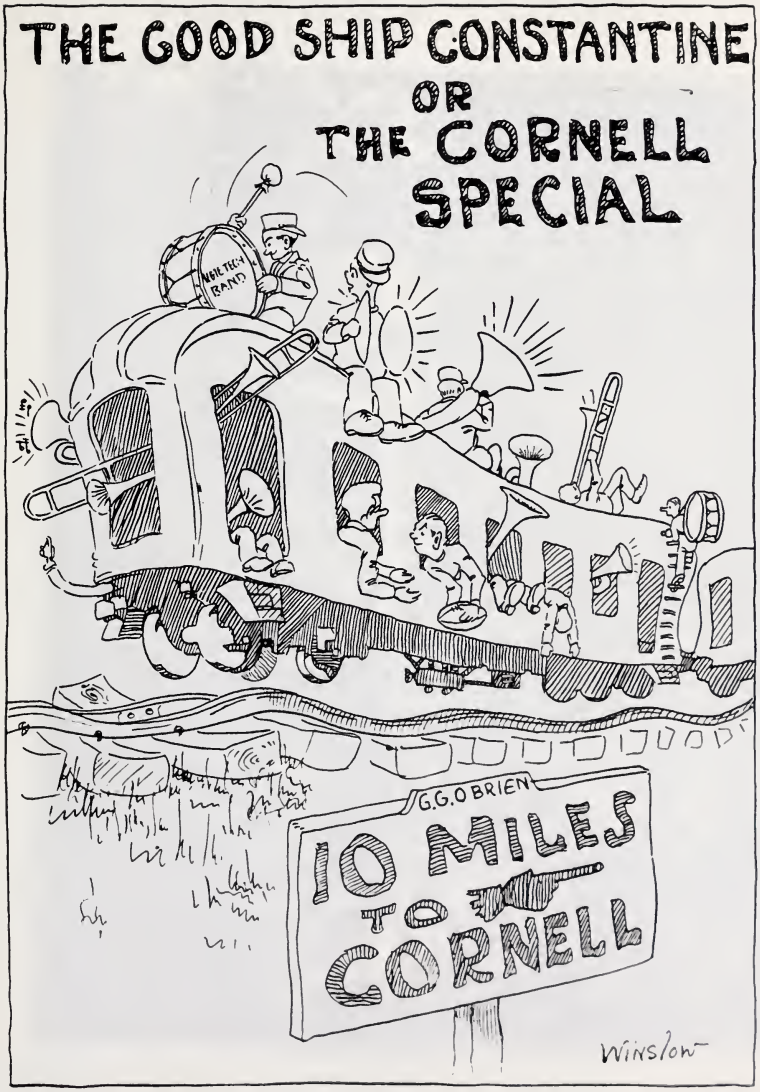
THE prospects for the best season ever were very bright when on September 15th over thirty-five huskies reported at Camp Louise Carnegie for preliminary training. Coach "Wally" Steffen, ably assisted by Coach "Bill" Hazel and our 1916 star full back, "Salt" Altdoerfer, whipped the squad into shape and brought back to Pittsburgh a strong and determined group of men.

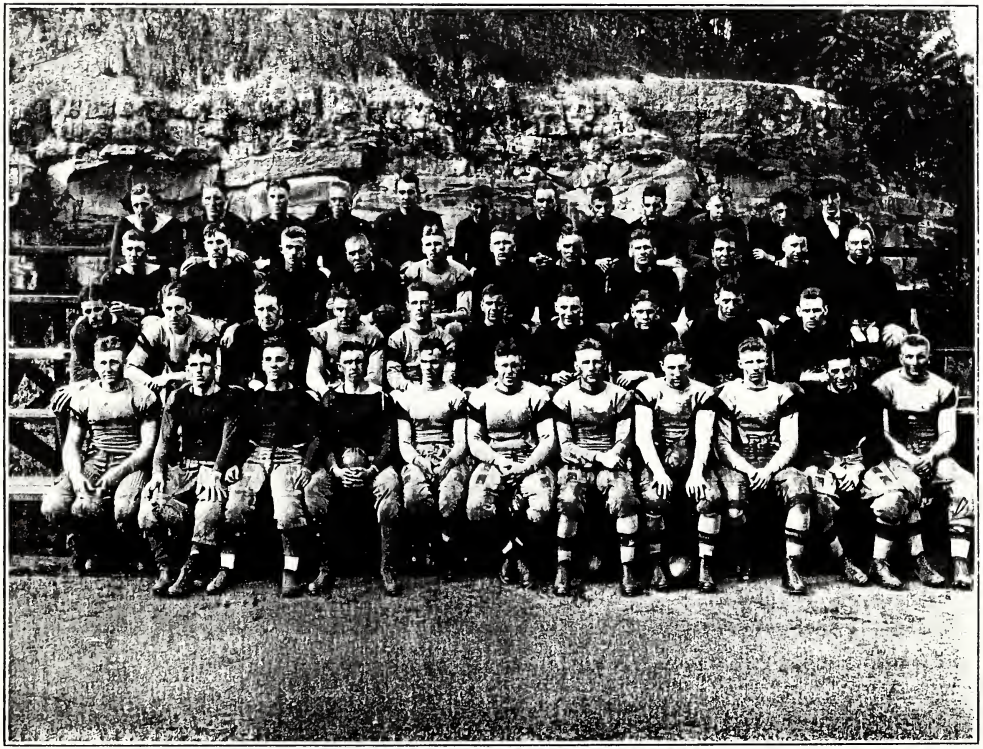
"Cap" Dosey of the Division of Industries had charge of the camp, and "Burt" Munhall relieved the boys of their aches and pains. It was a very successful training period, and gave the squad a good impetus. The veterans turned out to be: Marshall, Williams, Carey, Bloom, Brunwasser, and Bolinger. Added to this group, came some men with a football reputation behind them, such as: Loomis, Moon, Fletcher, Baldwin, and Hayes. With these men, Steffen was able to get fighting spirit into the squad.

The team came back and defeated Bethany in good fashion. A difficult schedule was ahead of the men and Steffen drilled them hard. The four toughest games were against W. & J., Cornell, Lehigh, and Pitt. In every one of these games the men put up a wonderful scrap, and showed the true Carnegie Tech spirit. These four games were lost, however, but not without a spirited fight.

The team was very light, and every one of the four defeats can be attributed largely to this cause. At the Pitt game the old rivalry was more marked than ever. Every one of the wearers of the Plaid fought tooth and nail and held the strong team to the very low score. Captain Marshall was a star in each game and could be depended upon at any stage of the battle. It is with great regret, that "Phil" along with "Scoops" Carey and "Vet" Williams will not be with us next year. The large number of Freshmen who were out for the squad, along with the older men, will form a good nucleus to work on for a banner 1920 team.

C. B. Schmidt.


THE GOOD SHIP CONSTANTINE
OR
THE CORNELL
SPECIAL
NOIL TECH BAND
G.G.O BRIEN
10 MILES
TO
CORNELL
Winslow



STATISTICS 1919 FOOTBALL SQUAD

Name	Position	Age	Weight	Height	Years on Team	Preparatory School	Class	Division	Course
Marshall, Philip P.	Halfback	24	160	5– 7	3	Peabody High	1920	Science	Civil
Loomis, Thos. J.	Fullback	21	175	5–11	0	Suffield School, Rutgers Prep.	1923	Industry	Machine Construction
Baldwin, J. S.	Halfback	21	160	5– 8	0	Eastern High	1920	Psychology	Insurance
Fletcher, A. E.	Quarterback	23	160	5– 8	0	Dean Academy	1923	Industry	Building Construction
Wittmer, H. G.	End	19	152	5–11	0	Allegheny High	1922	Industry	Building Construction
Williams, S.	Tackle	22	185	6– 0	3	Lorraine High	1922	Science	Metallurgy
Roth, Milton S.	Guard	20	185	5– 9	0	Butler High	1923	Science	Mining
Irwin, Alfred	Center	20	150	5– 9	0	Washington High	1923	Science	Metallurgy
McClean, Harold J.	Guard	19	175	6– 0	0	Peabody High	1922	Industry	Power Plant Management and Operation
Moon, D. J.	Tackle	24	185	6– 0	0	Grove City High	1922	Industry	Building Construction
Godden, Harold C.	End	19	155	5–11	0	Olean High	1922	Industry	Machine Construction
Brunwasser, Alex.	Fullback	22	155	5– 8	2	Fifth Avenue High	1921	Science	Mining
Levy, Abe	Quarterback	22	156	5– 7	0	Central High	1922	Science	Metallurgy
Bloom, Fred	Quarterback	21	145	5– 5	1	Parnassus High	1921	Science	Mechanical
Marshall, Roger	Halfback	20	150	5– 9	0	Peabody High	1923	Industry	Machine Production
Russell, A. W.	Halfback	20	160	5–10	0	Peddie Institute	1920	Psychology	Insurance
Bollinger, F. E.	Halfback	25	145	5– 8	2	Peabody High	1920	Industry	Machine Production
Hayes, E. G.	End	21	160	5– 9	0	Suffield School, Rutgers Prep.	1923	Industry	Building Construction
Temmel, A.	End	19	145	5–10	0	Schenley High	1923	Science	Electrical
Roberts, Willard	Tackle	21	180	6– 1	0	Keokuk High	1923	Science	Electrical
Carey, Homer F.	Guard	23	180	6– 3	1	Oakmont High	1920	Science	Mining
Gwinner, R. H.	Guard	24	175	5– 9	0	Salem High	1923	Science	Mechancial
Saylor, D. C.	Guard	24	190	5– 8	1	Westchester Normal	1920	Science	Mechanical
Henderson, H. C.	Tackle	19	170	6– 1	1	Greensburgh High	1921	Science	Mining
Flannery, E. G.	Tackle	20	170	5–11	0	Stanton Military Acad.	1923	Science	Metal
Goldberg, Nathan E.	Guard	22	190	5–10	0	Central High	1923	Industry	Building Construction
Swift, R. A.	Fullback	21	160	5–11	1	Avalon High	1921	Science	Chemical
Curtis, George W.	Guard	26	155	5–11	1	Canton High	1922	Science	Commercial

"Wally" Steffen
Head Coach

"Salt" Altdoerfer
Assistant Coach

1919 Varsity Team

OFFICERS

Phillip P. Marshall,'20	*Captain*
Neal J. Campbell,'20	*Manager*
Horace G. Nichol,'21 Paul J. Unzicher,'22	*First Assistant Managers*
Walter P. Steffen	*Head Coach*
F. E. Altdoerfer	*Assistant Coach*
Wm. M. Munhall	*Trainer*

PERSONNEL

Phillip P. Marshall, '20
Harold C. Godden, '22
A. E. Fletcher, '23
Thomas Loomis, '23
H. G. Whitmer, '23
J. S. Baldwin, '20
S. Williams, '20
M. S. Roth, '23
Alfred Irwin, '23
H. J. McClean, '23
J. D. Moon, '23
E. G. Hayes, '23
Abe Levy, '22
Willard Roberts, '23
H. F. Carey, '20
H. C. Henderson,'21
E. G. Flannery, '23
Geo. W. Curtis, '22

PHILLIP P. MARSHALL

Captain

"Phil" is a Peabody product, and justly can that school be proud of him. In his first game for Tech, in 1915, he ran down the field 95 yards for a touchdown. In his last game for Tech he ran through Pitt 93 yards for a touchdown. All during his career he displayed wonderful mastery of football science, and was easily the leader of his team. Whenever the breaks were going against us, he could be heard cheering his men on, and putting fighting spirit into their veins. We will always remember "Phil" by his quiet and gentlemanly manners, always giving a square deal, and full of pep.

HAROLD C. GODDEN

"Red" never did know when to stop breaking up plays and upsetting his rivals when they were about to put something over on him. He made a specialty of breaking up forward passes and diagnosing each play carefully. He has the distinction of being elected captain after one year's service, and a wise choice was made. Put a "peppy", red-headed, strong and initiative player at the head of a team and then watch results. We're with you "Red", and may success be yours. "Red" had his hand hurt in the early part of the season, but you would not have known it if you hadn't some inside information. He was always on the job when there was fun stirring, and usually one of the instigators. We can't beat Pitt next year, "Red", but we'll have a better team, anyhow.

A. E. FLETCHER

No one knew much about Andy before he arrived, but we had heard that he had played football before, and was somewhat of a "shark" at it. Coach Steffen gave him a trial in the Bethany game, and no one could have shown better judgment. As a result, he was the first choice at quarter and always could be depended upon. "Fletch" played in every game but W. & J., and the way he handled the Pitt game was wonderful.

He is a Freshman in Arts and his possibilities are great.

THOMAS LOOMIS

"Tom" came here with a bit of a reputation as a football player behind him. He lived up to it; always on the go, pushing ahead, carefully diagnosing plays and forever watching for trick plays. Whenever a few yards were absolutely necessary, "Tom" took the ball and Tech got the yards. He played a hard game always and was never out of condition.

He was badly crushed while in the Service, and many thought that his football days were over, but not so, and we think that "Tom" will be a big help next year. He starred at the start of the season against Bethany, and was the big help in every game.

H. G. WITTMER

"Ham" is the "fightingest" man—not only on the football field, but in the ring too. Hear about his fight with some Pitt fellow? Ask him. He is only a little fellow, but here it's a case of quality and not quantity. He is a 100% fighting man, and displays his vigor on the field much to his credit.

He handled his end position in great shape although his lack of weight was a handicap, he butted the big 'uns down as well as those smaller.

As this is "Ham's" first year, we are expecting big things from him as he grows up.

J. S. BALDWIN

"Baldy" was one of the great helps to Coach Steffen during the early trying days of the season. He had played three years on the Allegheny eleven, and knew football to a dot. He wasn't such a big fellow, but always hit the line with all kinds of pep. His specialty was end running, and he showed up well in this particular work.

"Baldy" was always figuring out plays, and his usual method was with the "galloping dominoes". He leaves us this year to go out into the world as Professor Baldwin. If he can teach as well as he plays football, his success is assured.

SYLVESTER WILLIAMS

Remember in 1916 when Pitt was stopped every time they tried a right end play? Well, it was "Vet" that stopped their runs, and he covered himself with glory. In 1917 he was captain-elect, but did not return to school until this fall. He shifted this year, and held down the tackle job in a very satisfactory fashion. In the first game he had the misfortune of having his nose broken, but refused to leave the game until he was "yanked". "Vet" was always a consistent, heady player, and we will miss him, as this is his last year on the squad. He has done much to build up the fighting morale of the team, and will long be remembered.

MILTON S. ROTH

"Al" has a fondness for ladies, and on the trips as well as at home, he likes to fuss the fair sex. In Pittsburgh, he spends most of his time—when not in training—over at the college on the hill—No—it's P. C. W.

But, admitting he fusses the ladies, he also "musses" up his opponents on the field. He plays a stellar game at center and guard, specializing on the latter. He had hard luck in hurting his ankle in the Allegheny swim-fest, and so was out of the later games. This is his first year in school, and his chances are certainly good.

ALFRED IRWIN

Irwin, one of the lightest men on the squad and holding down the position of the heaviest, played one of the most aggressive games of anyone on the squad. His lack of weight was made up by his sure passing and ability to get the jump on his opponent.

"Al" is a Washington, Pa., product, and has been a close follower of athletics, as he kept tabs on football at W. & J. He made a wonderful showing in his home town when we played W. &. J., and showed the natives some real local talent. The hardest part was that, as a Plebe, he had to act as porter to some of the upperclassmen, and displayed his strength to "the Girl".

HAROLD J. McCLEAN

"Hoss" is a Peabody High product, and early in life he developed a fondness for ladies, and this failing has never left him. He was so accustomed to looking around for them, that Steffen had to call him to the sidelines several times to tell him not to stand too high.

He made his debut in the Bethany game, and displayed considerable skill at guard. His aggressiveness and consistent playing made his berth permanent, and as this is his first year, there are big possibilities due from him. He is one of the heaviest men on the squad, and his weight was a big aid to him in all games. He was knocked out several times, but always came back harder than before.

D. J. MOON

"Dent", the bashful man, had the educated toe. His punting was the feature in many games and resulted in many gains. At Cornell, he gained ten yards on every exchange of punts; at W. & J., he handled the wet ball in a very creditable manner and made a hero of himself.

On the line he was aggressive and consistent, and able to get through almost every line to break up the defense. He was always to be depended upon to do his share in downing his opponents, and he tackled neatly.

He has an excellent build for a tackle, and with a three-year outlook ahead of him, Tech has a mainstay not only on the line, but also in the punting.

EDWARD G. HAYES

"Ed" came to us with Tom Loomis and, like Tom, had some athletic experience behind him. He had hard luck, though, with a sore foot that would not get well, and this incident kept him from being in more of the games.

"Ed" was the comedian in all of the trips and around the gym. He could recite Shakespeare, Whittier, and a few others, as well as "pulling off" some of his own. He was quite an artist on the mandolin, and could "string" them off pretty good.

WILLARD ROBERTS

Roberts, the big Plebe tackle, handled himself in a very creditable manner, and proved to be a big asset in Tech's football program. His weight and size made it difficult to stop him when he made up his mind to go through. Due to the fact that there were other tackles of more experience, Roberts did not play in as many games as he might have, otherwise. He could always be depended upon, and with a bit more coaching will bolster up the line in true fashion.

HOMER F. CAREY

"Scoops" has been known for a long time, not only in football but as a stellar basketball performer, and by the way, he is captain of his team for this season.

"Scoops" is long and rangy, and can reach a long way. At Cornell, he almost had an argument with the referee 'cause he was penalized for holding. Imagine "Scoops" doing such a thing! He has always been a consistent player, never spectacular but always on the job.

H. E. HENDERSON

"Skitch" was always a reliable man to have at tackle. He could "dope out" plays with lightning accuracy, and could be depended upon by his back field men. He, too, suffered the substitutes' bench quite a lot, but was always ready to jump in for his share.

He played his best game against Pitt—that is, for the time he was in. Always putting pep and fight into the squad, and full of it himself. Steffen's coaching is well demonstrated in this case, and next year "Skitch" will make a name for himself.

E. G. FLANNERY

Flannery was a scrapper, and succeeded in instilling fight and pep into the team whenever it needed it. He always charged right into the midst of the action, and when the smoke cleared away a lot of the damage was due to him. He held down a seat on the "sub" bench, but when sent in he was "in for blood."

He played stellar games against Pitt and Cornell, and it was said that he was the scrappiest man there. He has a good build, and three more years to play, so watch his smoke next year.

GEORGE W. CURTIS

George was a busy man during football season. He had his Soph Class to look after, besides keeping things going on the football end of it. In spite of his lack of weight he made a good guard, for he was fast, snappy, and a consistent, heady player. He had substituted as end in former years, but was changed to guard to help bolster the line.

With his experience behind him, and his unconquerable spirit, his next two years should be record-breakers for him in football.

ROGER MARSHALL

"Roge" took an excellent example from his brother, and played a brand of football that is hard to beat. He is aggressive, sure and dependable, heady, and quick to see a break on either side.

The Allegheny game proved his Waterloo when he was carried off the field with a broken ankle. He played several minutes of real football even after he was hurt, showing the spirit of which he is made.

He did not play the necessary number of games to win his letter, but due to his spirit, interest, self-sacrifice and hard work, it was awarded to him.

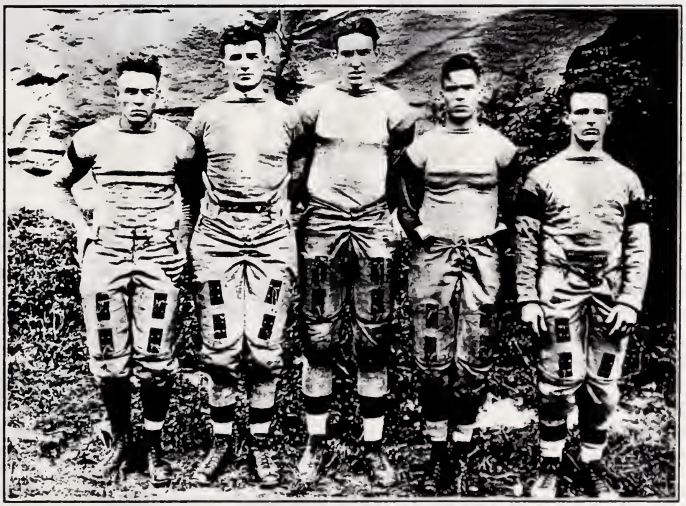
ABE LEVY

Levy was a very versatile player in the back field, and could be substituted into any position. His specialty was at quarter, and he displayed good judgment and handled himself well at all times. At W. & J., he covered himself with glory and showed his ability to hold fast to a dripping-wet ball. He was very fast on his feet and made great end runs.

A Jinx pursued him, and just before the Pitt game he was badly injured in an automobile accident, which kept him out of the game. His injuries, while very serious, did not take long to heal up, and he was soon back on his feet again.

We are looking forward to a close race for quarter next year, and Abe will have an even chance.

Do you play Football?
Boost that 1920 Team



FIVE VETERANS

"Burt" Munhall, *Trainer*

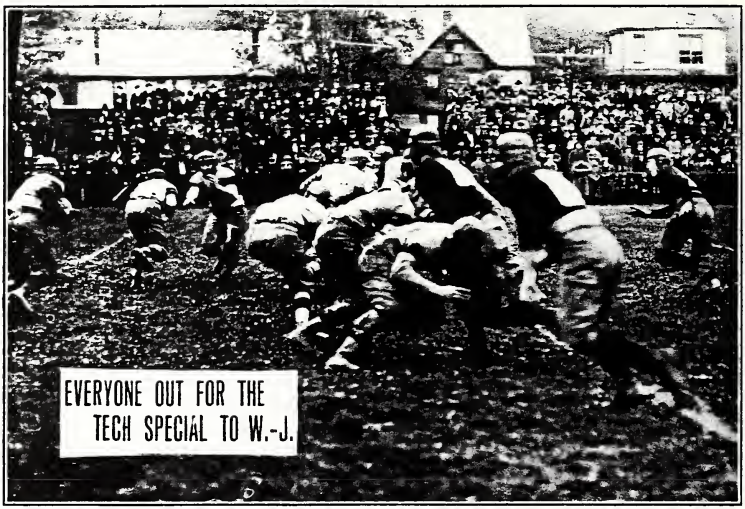
N. J. Campbell, *Manager*

1920 Football Schedule

Date	Opponent	Place
October 2	Yale	New Haven
October 9	Westminster	Home
October 16	Grove City	Home
October 23	University of Cincinnati	Home
October 30	Lehigh	South Bethlehem
November 6	Allegheny	Home
November 13	Bethany	Wheeling
November 20	Washington and Jefferson	Home

TECH 33—BETHANY 0

The day of October 4th dawned bright and clear. Big preparations were made for the first game, and every one was in a state of highest expectancy to see what our boys could do. The grandstands were filled, and the newly organized band filled everyone with pep and spirit. At 3:15 we kicked off to Bethany, and the season was on. By fast, careful playing, our boys outclassed their opponents, and several good prospects showed up. Acting Captain Phil Marshall was the individual star, by capturing three of the five touchdowns and also getting away on several long runs. Loomis also played a heady game, and made his debut in good form. Coach Steffen tried out several combinations, and gave his men a good test. "Vet" Williams suffered from a broken nose in the first quarter, but pluckily fought till he had to be taken out.

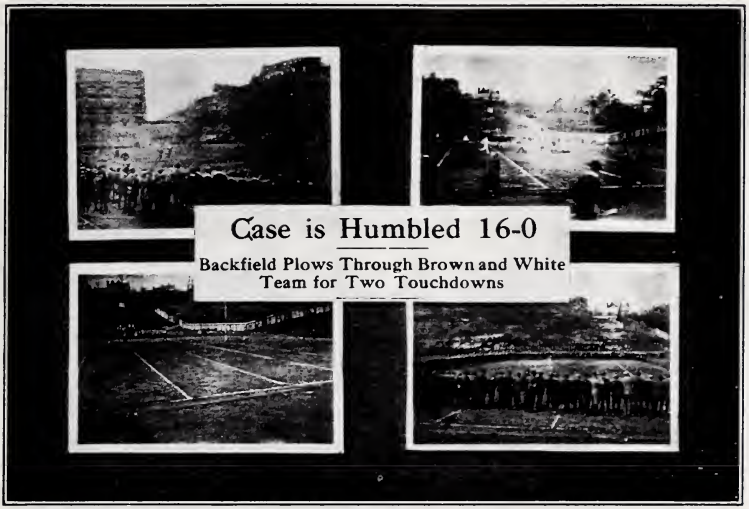


TECH 0—W. & J. 20

Did it rain at Washington? Well, I rather guess it did—it not only rained rain, but it also rained students, as the natives of that city thought. Two Specials left Pittsburgh with Techites aboard, and the little town of Washington, for once was a crowded place. Over one thousand students accompanied the team, led by their band of forty pieces. The students "peeraded" through downtown Pittsburgh and all over the city of Washington. Rain did not dampen the spirits of the rooters, and we cheered W. & J. off of the map.

The field was heavy with mud, and the rain fell in torrents. Our opponents were by far the heavier and, their weight was of a decided advantage. The game was featured by fumbles which in two cases were disastrous to Tech. On both occasions these fumbles resulted in touchdowns. The line held like a stone wall, and five times held W. & J. for downs.

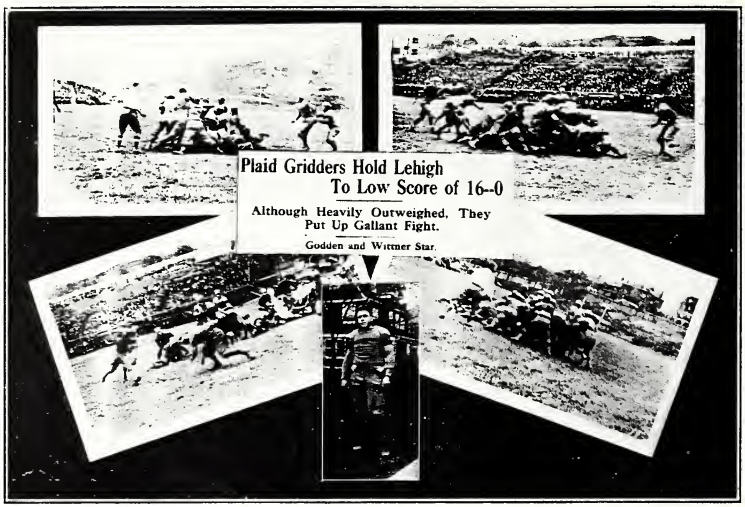
Captain Marshall played his usual stellar game, and Moon showed up exceptionally well in the punting. Baldwin was injured in the fourth quarter, and suffered two broken ribs.



TECH 16—CASE 0

Straight football; with sensational end runs and gains via the aerial path were the order of the day when we took the measure of Case. Fletcher showed himself as the individual star by making some big gains due to his fleetness of foot and good football sense. The game was marred a bit by unclean playing, and several disputes were started. Loomis and Brunwasser made the touchdowns, and Fletcher kicked the goals. Bruni got into the game after Loomis was knocked out, and "Mista" Brunwasser proceeded to plow through the Case line for the second touchdown.

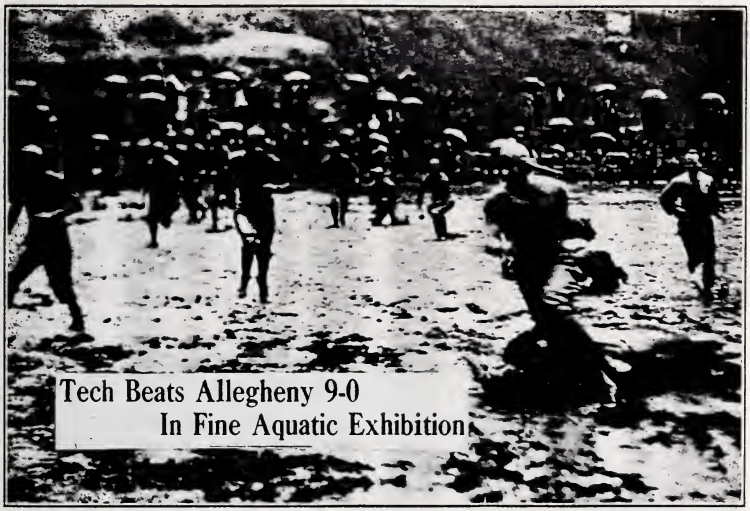
A capacity crowd witnessed the game and cheered wildly and well. When the Pitt score against Syracuse was announced—some cheered, others wept.



TECH 0—LEHIGH 16

On a fast field, before a large audience and against a group of seasoned players, Tech played a great game. Not once but several times did our line hold when a touchdown was seemingly inevitable. The Lehigh team was a well-balanced one, and one of the best that ever played on Tech field. The stands were well filled, and the cheering was above par. More than once the urgings of the students kept the team's morale up to such a standard that Lehigh found it difficult to penetrate the line.

Our two little ends played the best games—ever on the watch for passes and end runs. Irwin at center was in every play, and certainly did wonders. The game was played early, and at the close of the both teams were taken to see the last part of the Pitt-Georgia Tech game.

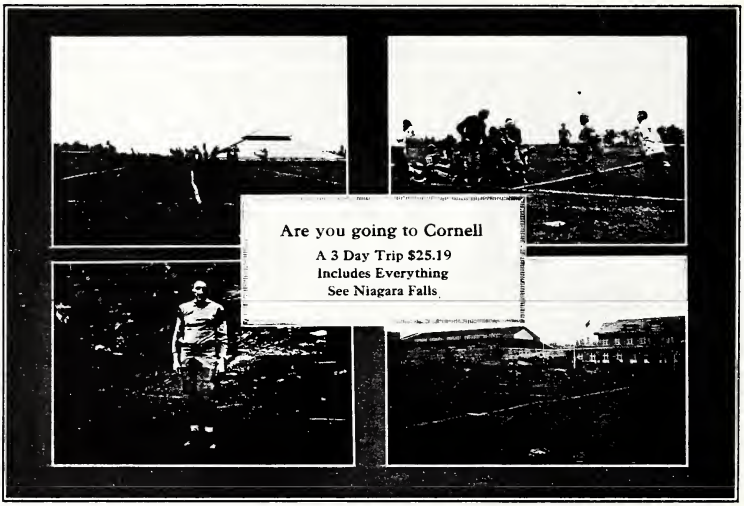


TECH 9—ALLEGHENY 0

RAIN? Well I rather guess it did, and as the Pittsburgh papers had it: "Carnegie Techites prove better mud-horses than Allegheny". The rain fell in torrents throughout the entire game, and the few hundred spectators were huddled up under umbrellas or newspapers. "Tom" Loomis thought he was still in the Navy, and did some wonderful dives, and submarined the Meadville boys several times.

Capt. Marshall made a touchdown in the second quarter, and Fletcher kicked the goal. In the beginning of the second half, Tech made a safety and brought up the total to 9 points.

A great many fumbles were made by both sides; however, the breaks were about even.

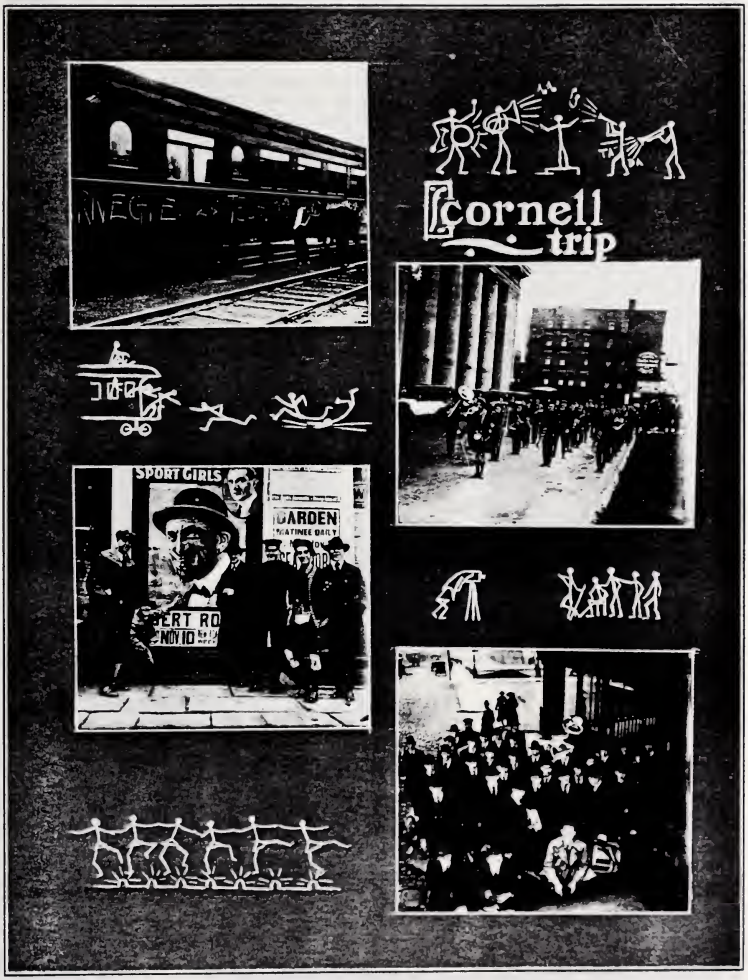


CORNELL 20—TECH 0

Something exploded at Ithaca, and when the smoke cleared, the New York Staters had the larger end of the score. The big boys from Cornell were a bit scared of us before the game, but they settled down to hard work, and Capt. Shiverick went down for all the points.

Moon considerably outpointed his opponent, and each time gained several yards in exchanges. The forward pass was initiated in this game to a greater extent than before, and some brilliant plays were made.

The Tech Band and the small group of Tech rooters outplayed and outcheered (?) Cornell from the start to the finish. The Ithacans marveled at the spirit shown, and learned what real pep is.


Cornell trip
SPORT GIRLS

Pitt 17—Tech 7

DID you see that game? Wow! Coach Steffen, Warner, Doc Marks, and every other football fan in Pittsburgh said it was the best game of football they had seen played in Pittsburgh this year. We had a fighting team from start to finish, and every one of them was doing his "damdest". Pitt was scared, and they admitted it later—you remember how quiet their cheering stands were all during the first half. Were ours quiet, even when the score was against us?

Capt. "Phil" made a sensational 93-yard run for a touchdown. Loomis ran alongside for interference, and picked out the only man that had a chance to hit "Phil." The crowd went wild—Tech with joy and Pitt with fear. The Pitt goat over in the Tech side capered around knowingly, and the C. I. T. banner looked down from its lofty perch on the greased flagpole and smiled. At the end of the second half, Tech was cheering, using a locomotive as follows: 1-2-3-4-5-6-7. In the second half, Warner sent in all of his men he was saving for the State game, and by the hardest type of fighting scored two touchdowns and one field goal.

Every man on the Tech team starred and fought the fight of his life, and the Tech season was closed in a memorable way.

Line up:—

Tech		Pitt
Wittmer	L. E.	McDonald
Williams	L. T.	Gourley
Carey	L. G.	Thomas, Capt.
Irwin	C.	Ginn
McClean	R. G.	Kratzert
Moon	R. T.	Markowitz
Godden	R. E.	Herskowitz
Fletcher	Q.	Hamburger
Marshall	L. H.	Aschman
Baldwin	R. H.	Laughran
Loomis	F. B.	A. Breman

Score;						
Pitt,	0	0	7	10	—	17
Tech,	0	7	0	0	—	7

Touchdowns; Marshall, Hastings 2.

Goals from touchdowns; Fletcher, Davies 2.

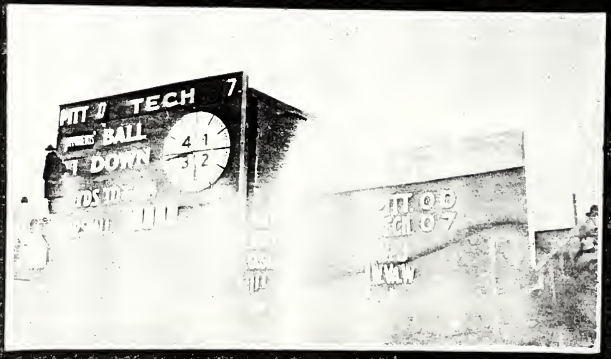
Field Goals; (Placement) Davies.

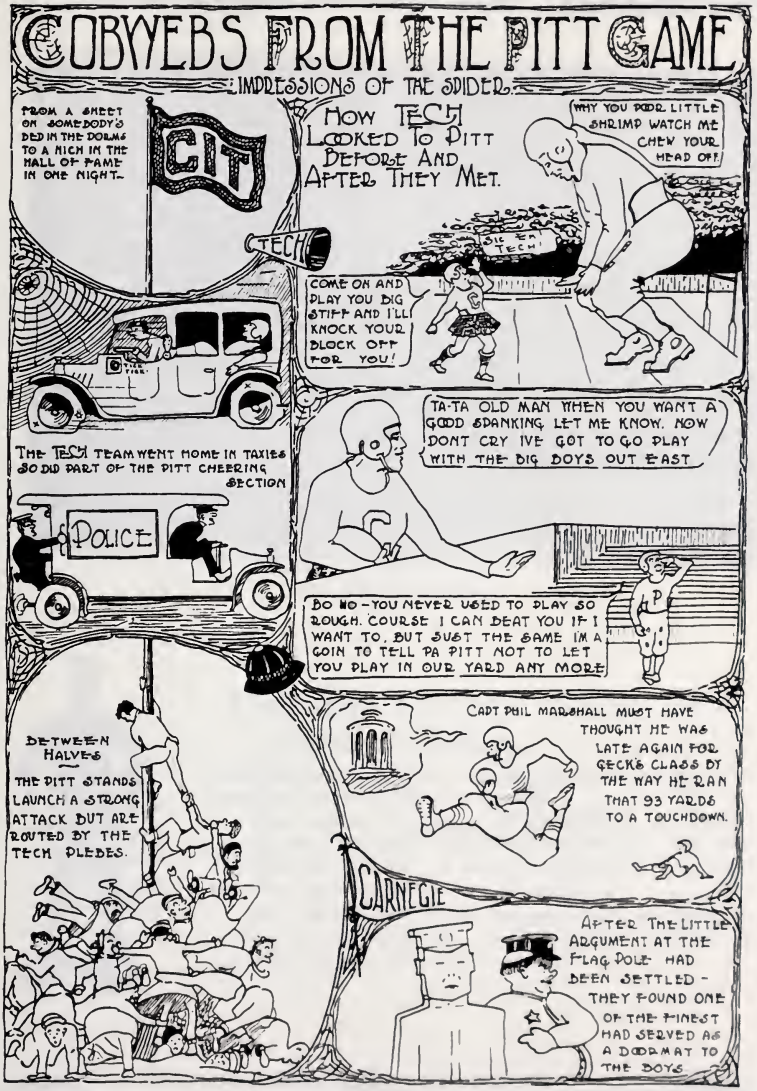
Substitutions: Pitt—McCracken for McDonald, Meanor for Thomas, Stein for Ginn, McClean for Kratzert, Bond for Markowitz, Measley for Bond, Ewing for Herskowitz, Davies for Aschman, Morrow for Hamburger, Peters for Laughran, Hastings for Breman, Krotzer for Hastings.

Tech—Hayes for Wittmer, Roberts for Irwin, Flannery for McClean, Henderson for Flannery.

MAKE PANTHERS FIGHT
PLUCKY PLAID PLAYERS
HARDEST TO WIN, 17-7
OFFICER! HES OUT AGAIN!
PANTHER
HOOT MON! I'LL GIVE HIM A RUN BEFORE HE GETS ME
TECH
SPIRIT

We nominate to the
HALL of FAME
William Metcalf Cummins,
the man who on the
night of November 10,
1919, climbed the
Flagpole at Forbes
Field, and placed a
Tech flag at its peak.

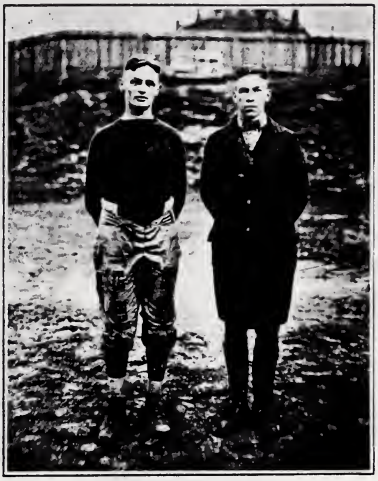



COBWEBS FROM THE PITT GAME
IMPRESSIONS OF THE SPIDER.
FROM A SHEET ON SOMEBODY'S BED IN THE DORMS TO A NICH IN THE HALL OF FAME IN ONE NIGHT.
CIT
TECH
How TECH Looked To Pitt Before And After They Met.
WHY YOU POOR LITTLE SHRIMP WATCH ME CHEW YOUR HEAD OFF!
SIC 'EM TECH!
COME ON AND PLAY YOU BIG STIFF AND I'LL KNOCK YOUR BLOCK OFF FOR YOU!
TA-TA OLD MAN WHEN YOU WANT A GOOD SPANKING LET ME KNOW. NOW DONT CRY IVE GOT TO GO PLAY WITH THE BIG BOYS OUT EAST
SO NO - YOU NEVER USED TO PLAY SO ROUGH. COURSE I CAN BEAT YOU IF I WANT TO. BUT JUST THE SAME IM A GOIN TO TELL PA PITT NOT TO LET YOU PLAY IN OUR YARD ANY MORE
THE TECH TEAM WENT HOME IN TAXIES SO DID PART OF THE PITT CHEERING SECTION
POLICE
BETWEEN HALVES
THE PITT STANDS LAUNCH A STRONG ATTACK BUT ARE ROUTED BY THE TECH PLEBES.
CAPT PHIL MARSHALL MUST HAVE THOUGHT HE WAS LATE AGAIN FOR GECKS CLASS BY THE WAY HE RAN THAT 93 YARDS TO A TOUCHDOWN.
CARNEGIE
AFTER THE LITTLE ARGUMENT AT THE FLAG POLE HAD BEEN SETTLED - THEY FOUND ONE OF THE FINEST HAD SERVED AS A DOORMAT TO THE BOYS

FRESHMAN TEAM, 1919

SUMMARY OF SEASON

Date	Opponent	Tech	Opponent	Place
Oct 11	Indiana Normal	0	0	At Home
Oct. 24	New Kensington High	14	0	New Kensington
Nov. 1	Kiski	0	25	Saltsburg
Nov. 15	Erie High	0	13	Erie
Nov. 22	Pitt Freshmen	0	39	Forbes Field



Capt. Anderson and Mgr. Nichol

Coach Hazel

Freshman Football, Season 1919

The Freshman Football Squad started out with bright prospects for a successful season, and considering the handicaps under which they were working, they did well.

There probably never was a year in the history of Tech that so much real "Tech spirit" was displayed as was shown this year. The Freshmen came out in goodly numbers and worked like demons to make things go—and they did.

Even though the season did not end quite to our liking, we certainly are going to let the Frosh know that their work is appreciated by each and every one at Tech.

The Season

DATE	TECH	OPPONENT
April 22	Tech 5	Duquesne 3
May 8	Tech 13	Lebanon Valley College 8
May 21	Tech 2	Ohio Wesleyan 9
May 29	Tech 4	Muskingum 5
May 30	Tech 4	Kiski 12
June 3	Tech 5	Muskingum 6
June 7	Tech 0	Penn State 9
June 9	Tech 0	Bucknell 11
June 10	Tech 2	Penn State 6
June 14	Tech 5	Indiana Normal 10

BASEBALL SQUAD, 1919

1919 Baseball

OFFICERS

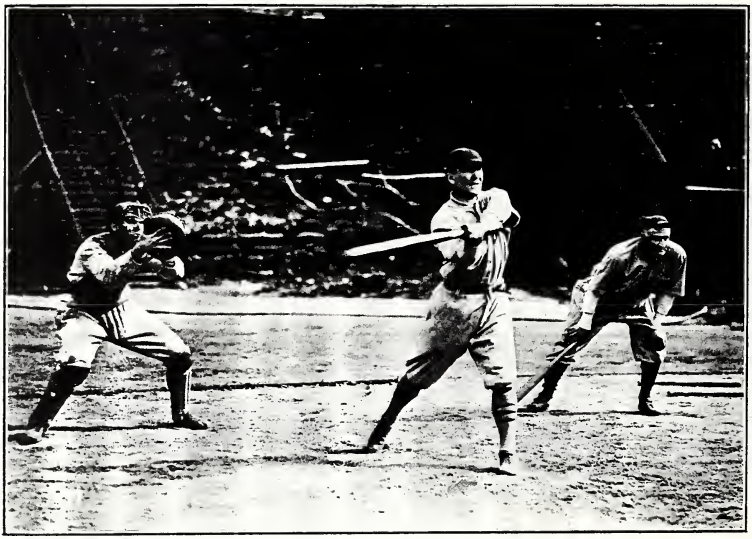
M. Edward Gretzler	*Captain*	John Honus Wagner	*Coach*
John R. Gaugler	*Manager*	Wm. M. Munhall	*Trainer*

PERSONNEL

M. Edward Gretzler	Pitcher	Charles O. Hoban	Outfield
Holmes W. Lynn	Shortstop	Elmer F. Weiss	Pitcher
David H. Abrams	Outfield	Harold C. Godden	Catcher
James A. Gates	Outfield	Edward S. Lundell	Third
Raymond J. Gannon	Second		

SUBSTITUTES

W. H. Oakley	C. E. Mauer	N. Meyers	H. Lusby
J. F. Huffman	P. D. Good	A. L. Elliot	G. E. Tucker



GATES AT BAT

Baseball, 1919

With the man that put Pittsburgh on the baseball map as its coach, the Tech Baseball team went through a great season. It has difficulty in getting and more difficulty in keeping the men on the squad up in their scholastic standing. The greater majority of the squad were green men and had to be taught the fundamentals of baseball. These men were taught in a manner that they will never forget, and the hopes for a star 1920 team are high and well founded.

"Gretz", as captain, was an ideal leader and will be missed by the men this year. He was also famous as a football and basketball player—always on the go and full of life.

ELMER WEISS

The number of games played was small, but this was due to the activities of Jupiter Pluvius who always shed tears at the wrong time. Bethany canceled all athletics, and therefore cut into our schedule. The game with Westminster was tried three times, and the most we could do was one and a half innings. On the eastern trip, Lebanon Valley College was the only game played, due to the weather conditions.

At the close of the season, Holmes W. Lynn, star short stop, was chosen captain and will prove a good leader. "Windy" plays a fast game and will set a good example for his men to follow. Alex. Drenx was elected to fill the shoes of Gangler as manager, and is capable of doing so. "Al" May will be his assistant, and a successful season is anticipated.

ABRAMS AT BAT

"LEFTY" LUSBY

COACH WAGNER

The 1920 Schedule

DATE		OPPONENT	PLACE
Wednesday	April 21	Duquesne	Home
Friday	April 23	West Virginia	Morgantown
Saturday	April 24	West Virginia	Morgantown
Saturday	May 1	Grove City	Grove City
Thursday	May 6	Grove City	Home
Saturday	May 8	Juniata	Home
Friday	May 14	Bucknell	Home
Wednesday	May 19	Pittsburgh Collegians	Home
Saturday	May 22	Bethany	Bethany
Saturday	May 29	Bethany	Home
Monday	May 31	Muskingum	Home
Thursday	June 3	Juniata	Juniata
Friday	June 4	Bucknell	Bucknell
Saturday	June 5	Penn State	State College
Wednesday	June 9	Duquesne	Duquesne
Saturday	June 11	Alumni	Home

The Basketball Season, 1919-1920

Football had hardly ceased its activities, when the Basketball squad started its preliminary work-outs. Coach Bert Bianchi was on hand to drill these men, and put them through good practices. Among the early arrivals on the floor were: Harry C. Hamman, a letter man of two years; H. W. Lynn, another two-year letter man; Roy D. Foxon, who was Varsity for two years; H. G. Nichol, a fast guard from the previous season; A. F. Leete, another guard from 1918; P. D. Good, one of Tech's most energetic athletes; F. C. Wire, a center from last year; and Allan, a fast and steady forward. These men started work before the football season closed, and with the finis of football, Captain H. F. Carey, guard and center; J. D. Moon, a new man in our midst but with some athletic experience; Harold C. Godden, a fast guard on his Plebe team; and among others that appeared on the floor were Dosey, Gibson and Maurer.

COACH BIANCHI

With the older men as a nucleus, Coach Bianchi was able to soon get a line on the new comers. The men practiced hard, and got together a fast combination. The one that seemed to work the best was: Hamman and Allan, forwards; Carey or Dosey, center; Moon, Lynn or Carey, guards.

The first game of the season was against Princeton, on January 2d. Putting up a hard fight, our boys took the smaller end of the 33-17 score. Right at this time the Faculty maul eliminated several good prospects for the team. Those who were withdrawn were Foxon, Nichol, Wire and Dosey.

With the pep curve high, the team journeyed to Westinghouse Club, and brought back a 34-29 victory.

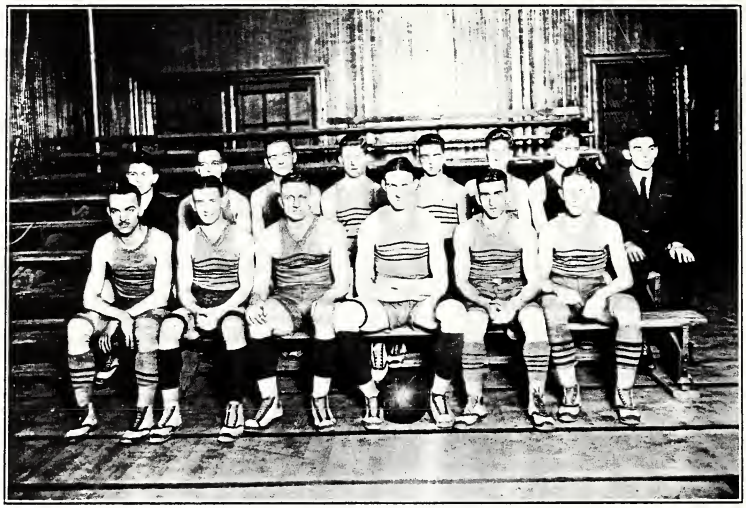
From then on, a Jinx seemed to follow the team, and although they put up stubborn fights, the breaks were against

them. We lost to West Virginia, 22-21—a heart-breaking score. W. & J., in the last two minutes of play ran up six points, and took the 35-30 score. Allegheny's fast team invaded our territory, and after a nip and tuck game, left town with the larger end of the 23-21 tally. Grove City next, and the Jinx still with us; we lost, 39-32. The team then invaded Allegheny's territory and dropped the game, 46-26. The next night at Grove City they overthrew the Jinx, and defeated that college, 23-21. The next game, with Duquesne, resulted in Tech's victory at 41-36.

At this time of the season the book goes to press, and you will find the results of the remainder of this season in the 1921 Year Book. The schedule for the rest of the season is as follows:

Feb. 18	Westinghouse Club	at home
Feb. 20	W. & J.	at Washington
Feb. 26	Franklin & Marshall	away
Feb. 27	Rutgers	at New Brunswick
Feb. 28	Lehigh	at So. Bethlehem
Mar. 4	Colgate	at home

MANAGER YELLE AND CAPTAIN CAREY



VARSITY BASKETBALL SQUAD

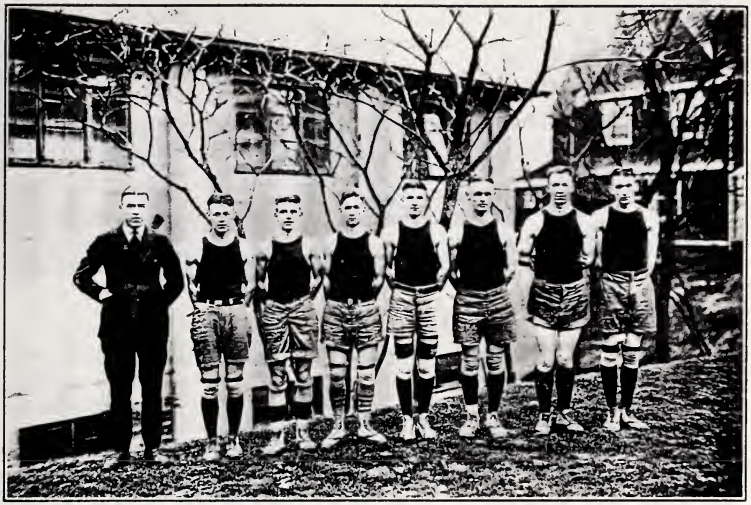
Varsity Squad

OFFICERS

Homer F. Carey	*Captain*
Matthew F. Yelle	*Manager*
Bert Bianchi	*Coach*

PERSONNEL

Hammann	*Forward*	Lynn	*Guard*
Allan	*Forward*	Good	*Guard*
Dosey	*Forward*	Godden	*Guard*
Carey	*Center*	Leete	*Guard*
Moon	*Center*	Nichol	*Guard*
Wire	*Center*		



FRESHMAN BASKETBALL TEAM

"Skitch" Henderson	*Manager*
Gibson	*Forward*
McCaw	*Forward*
McKenna	*Center*
Miller	*Guard*
Anderson	*Guard*

GAMES PLAYED

Date	Opponent	Plebes	Opponent
Jan. 10	Westinghouse Reserves	32	31
Jan. 17	South Hills High	43	28
Jan. 21	Indiana Normal	44	36
Jan. 24	Bellevue High	31	32
Feb. 11	Dusquesne High	33	31
Feb. 13	Bellevue High	27	29

Fraternity-Dormitory Basketball League

AMERICAN LEAGUE

	Won	Lost
Sigma Nu	4	0
Kappa Sigma Rho	4	1
Dorm No 4	3	1
Sigma Alpha Epsilon	2	1
Delta Upsilon	2	1
Opheleum	2	2
Dorm No. 2	1	3
Dorm No. 6	0	4

NATIONAL LEAGUE

	Won	Lost
Theta Xi	3	0
Woodlawn Club	3	1
Tau Gamma Phi	3	1
Dorm No. 1	3	1
Sigma Rho	1	3
Phi Epsilon Pi	1	3
Delta Epsilon Omega	1	3
Xi Sigma Upsilon	0	2 (Forfeited 2)

These standings are for games played up to February 17th, the date of going to press.

Track Season, 1919

The Track Season of 1919, under the direction of Coach Bill Hazel, was very successful; perhaps not from a victory standpoint, but from the viewpoint of a good start for a well-balanced organization and increasing spirit. The squad started out under handicaps of: no winter training, few old men, and the old Faculty maul. With but a couple of veterans on the squad, the coach had his difficulties in getting a good line on his men. New talent appeared, and the ball started rolling with about fifty men on the squad.

Capt. Schmidt

The Penn Relays loomed up as the big starter, and a score of men tried for berths on the team. The fight was reduced to: Schmidt, captain, Hiller, Gare, Russell, Sachs, Stone and Nieman, of whom Schmidt, Hiller, Gare and Sachs, with Stone as substitute, were chosen to represent the school at Philadelphia. The race was lost to W. & J., by a very few yards, the time being 3.35⅕. With more pep and determination the squad resumed work, and on April 29th the Sophomores easily won the Handicap Interclass Meet. The Pittsburgh Press Meet Handicap was next, and the big end of the 33—17 score went to Pitt. Several of the best men on the squad were held out, due to scholastic standing, but they were not discouraged.

The Lafayette Meet at Easton brought them against real hard and organized competition, and the final score stood 71⅖—40^{3}⁄$_{5}$ Lafayette. The Dennison Meet was next on schedule, and remembering the close fight the year before, our men were primed for the occasion. The same fight was displayed by both teams as in the former year, but the score was not as close, Tech winning 78—36.

Mgr. Little

Every one had on his fighting clothes for the Pitt Intercollegiate Meet, but the weather man made the track impossible to run on, and the meet was called off. The next week brought on the big Tech Interscholastic Meet for High and Prep schools, and the Varsity's Dual Meet with Allegheny. The former was won by Shaw High School of Cleveland, which brought down a peppy and fighting squad. In the Varsity Meet, due to tardiness of some of the members, the score stood 58—68 in favor of Allegheny. In this meet, Ellerton broke the school discus record with 115 ft. Sacks, the old "iron horse", ran and won the half-mile, one-mile and two-mile races, and would have run in the relay if he were needed. Capt. Schmidt reeled off the quarter in 51⅕, his best time for the year.

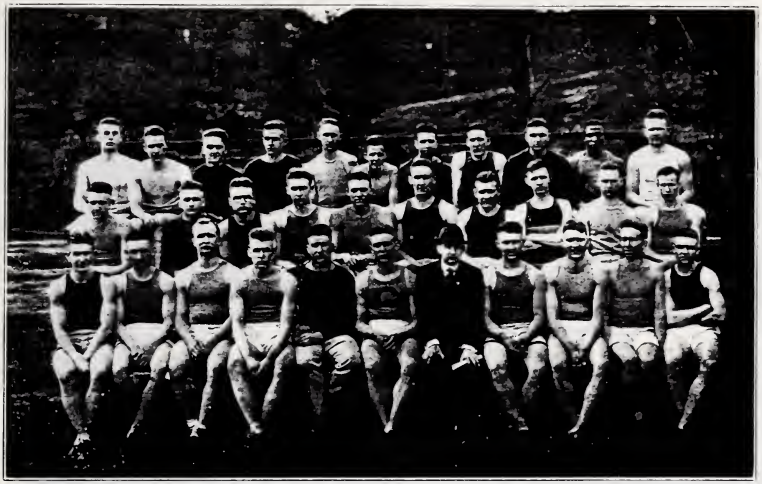
The Geneva Meet at Beaver Falls was the last meet of the season. Tech easily captured this with a score of 71—46. In this meet, Ellerton again broke his discus record with a distance of 119 ft. 3½ in. to his credit. The Relay Team broke the school record, running the mile in 3.28⅗.

The season over, everybody happy, thoughts and plans were made for the 1920 season. The squad lost through graduation: Ellerton, Davidson, Faville, Sacks and Juergens, all of whom will be greatly missed. C. B. Schmidt was re-elected captain, and is working hard to increase the fighting spirit of his team. Manager C. K. Little deserves much credit for his efficient methods in handling the team, and his successor, E. J. Rehm, is showing his ability in successfully caring for the wants of the new squad.

Coach Hazel

The letter men for the year were Captain Schmidt, Sacks, Ellerton, Davidson, Gare, Petry, M. J. Smith, Juergens, Russell, Faville, Hiller, Stultz, Harriman, Manager C. K. Little. Of these men the following will be on hand for 1920; Captain Schmidt, Hiller, Gare, middle distance runners; Russell, sprints; M. J. Smith, Stultz, Harriman, in the jumps. With this nucleus a strong team should be organized, and 1920 will be a banner year for track.

What are you doing for Tech?
You may be a Track Man!
See Coach Hazel



TRACK SQUAD, 1919

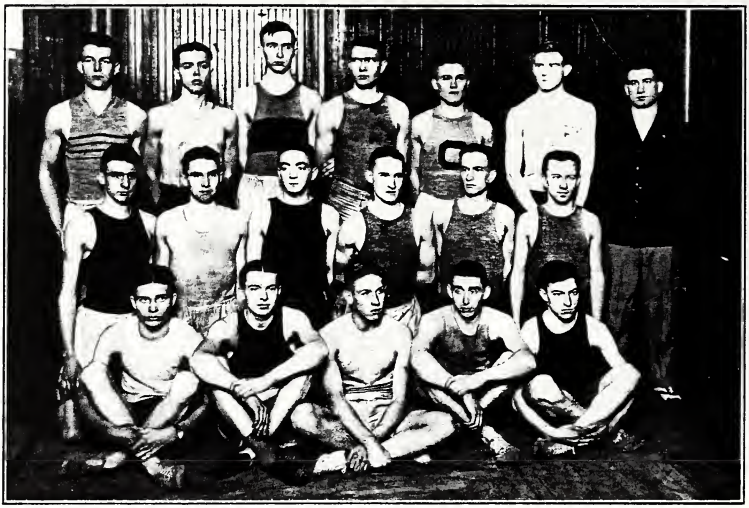
Resume of the Season, 1919

OFFICERS

Clarence B. Schmidt	*Captain*
C. Kenneth Little	*Manager*
Ernst J. Rehm	*Assistant Manager*
William J. Hazel	*Coach*
William M. Munhall	*Trainer*

Track Meets' Record, 1919

Date	Event	At	Tech's Place
April 26	Penn Relays	Philadelphia	Second
May 3	Pittsburgh Press	Schenley Oval	Second
May 10	Lafayette Dual	Easton	Second
May 17	Dennison Dual	Tech Oval	First
May 31	Interscholastic and Allegheny Dual	Schenley Oval	Second
June 7	Geneva Dual	Beaver Falls	First



CROSS-COUNTRY SQUAD

CAPT. GARE

Cross-Country, Season 1919

Coach Hazel sounded the bugle call for track men to report for training in cross-country work. Many men came out and endured the hard work-outs in disagreeable weather, which showed that "Tech spirit" could not be beaten.

Two meets were held: one at Cornell, in which we lost by a score of 77 to 28 points. In this meet, Captain Schmidt injured his ankle, and was forced to discontinue work for the remainder of the season. The other meet was held at Allegheny. This time we were nosed out by Pitt by 2 points.

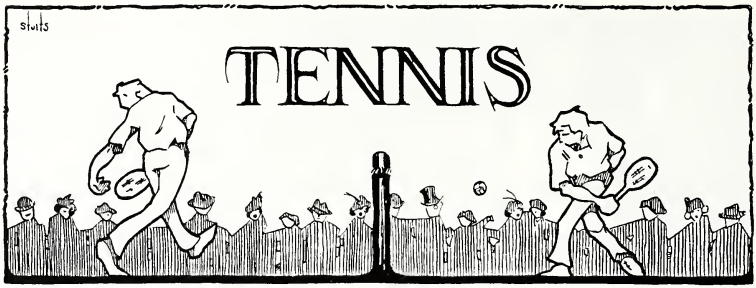
Later, a special meet was held with Pitt, and Tech men crossed the tape first in six of the eight events, but these results were contested by Pitt, so it was termed a "No Meet". Efforts to arrange another meet with Pitt were unsuccessful, owing to the breaking off of athletic relations by Pitt.

The men who finished the season were Captain Gare, Code, DuVall, Gotham, Greenlaw, Gossard, Hosdwick, Hiller, Hough, Kossler, Livingston, Miller, McDonald, Nutting, Patterson, Pierce, Reilley, Smith, Thomas, Wilson and Zimmerman.

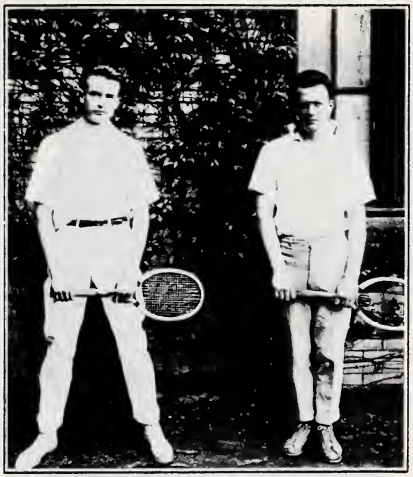
TRACK AND FIELD RECORDS

Carnegie Institute of Technology

Event	Time or Distance	Holder	Meet	Year
100 yards	10⅕ sec.	E. Dowling, '09	Pitt Intercollegiate	1909
		C. M. Crawford, '13	W. P. I. A. A.	1911
		E. W. Steinmetz, '14		
		C. E. Hemmann, '17		1916
220 yards	22 sec.	E. W. Steinmetz, '14	West Virginia Dual	1911
440 yards	50⅗ sec.	C. E. Hemmann, '17	Pitt Dual	1916
880 yards	2 min. 1⅖ sec.	E. R. Hazelton, '15	Pitt Dual	1914
1 mile	4 min. 31 sec.	E. R. Hazelton, '15	Pitt Intercollegiate	1914
2 miles	10 min. 26⅕ sec.	E. R. Hazleton, '15	Allegheny Dual	1913
120 yard Hurdles	16 sec.	C. M. Crawford, '13	Penn State Dual	1912
220 yard Hurdles	25⅘ sec.	Guy Halferty, '09	Pitt Intercollegiate	1909
High Jump	5 ft. 9½ in.	Edwin Haub, '19	Pitt Intercollegiate	1916
Pole Vault	11 ft. 4 in.	H. T. Wright, '15	Westminster Intercollegiate	1915
Broad Jump	21 ft. 5½ in.	Harry Bremmer, '18	Westminster Dual	1915
Discus	119 ft. 3½ in.	Geo. Ellerton, '19	Geneva Dual	1919
16 pound Hammer	128 ft. 4 in.	J. C. Roe		1910
16 pound Shot	40 ft. 6½ in.	Geo. Ellerton, '19	P. A. A. Dual	1919
1 mile Relay	3 min. 28⅗ sec.	H. F. Nieman, P. Sacks, M. S. Gare, C. B. Schmidt	Geneva Dual	1919



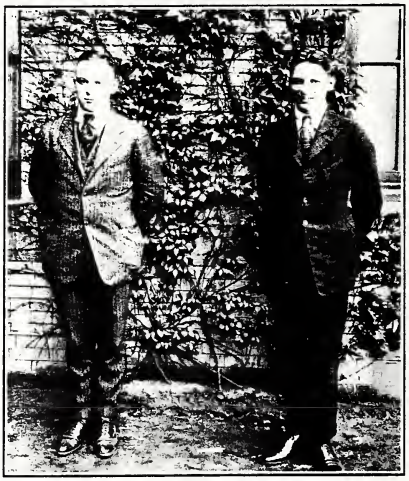
VARSITY TEAM



CAPT.-ELECT STOCKSLAGER CAPT. BEATTY

The Team

JOHN D. BEATTY, '20	*Captain*
FRANCIS J. NUTALL, '19	*Manager*
COL. JOHN C. BROOKS	*Coach*
E. S. STOCKSLAGER, '20	C. J. COPLEY, '21
D. B. GAWTHROP, '20	J. C. HARKNESS, '21



MGR.-ELECT HIRSCH MGR. NUTTALL

Summary, 1919 Season

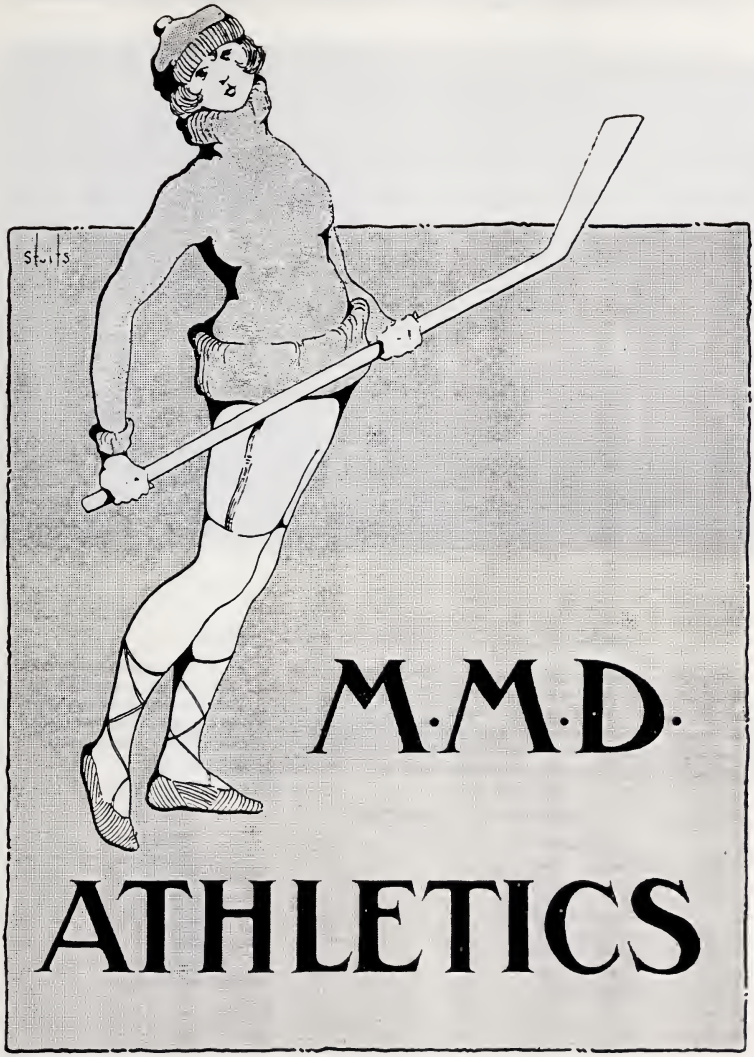
DATE	OPPONENT	COURT	TECH	OPPONENT
May 14	Pitt	P. A. A.	5	1
May 26	W. & J.	Home	3	3
May 28	W. & J.	Washington	2	4
May 29	Grove City	Grove City	6	0
May 30	Westminster	Westminster	6	0
June 3	Westminster	Home	5	1
June 7	Grove City	Home	5	1
June 11	Pitt	Home	6	0

COLONEL BROOKS, *Coach*

Tennis, 1919

Tennis started out with a bang last spring, and a large squad appeared for the try-outs. Out of this squad, Colonel Brooks picked a representative team, and worked the team into a finished product. Captain Beatty played a stellar game all season and will be a big factor on the team in 1920. In fact, the entire team will be available for the 1920 season, and big results are expected. Our rivals across the way were sadly out of it in tennis as the summary shows.

E. S. Stockslager was chosen captain for 1920, and will prove an able leader, besides "shaking a mean racket". Ed. Hirsch will arrange the games and assume the duties of manager, with J. J. Gorman as his assistant.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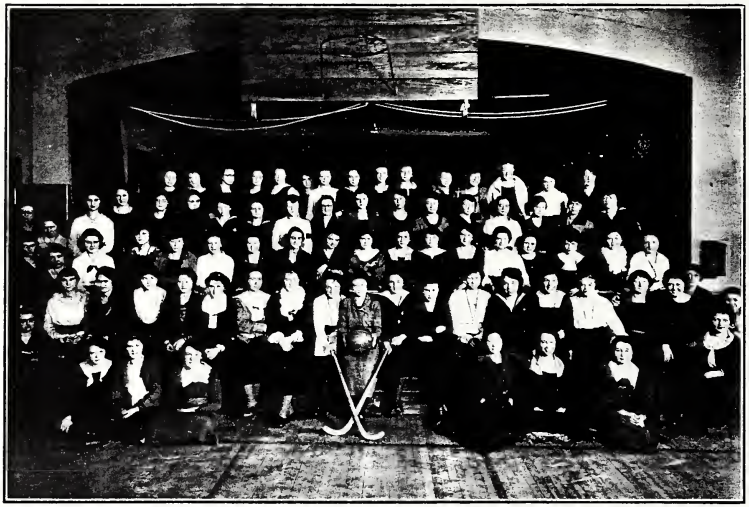
ATHLETICS



M. M. C. C. Athletic Association

The Athletic Association has been better supported than in any year heretofore, both in membership and in representative sports. It is the aim of each member of the association to make as many points as possible. Each one making the class team in volley ball, basketball, field hockey or tennis, is credited with ten points, and those on the winning team are entitled to five additional points. Points may be earned also in swimming and hiking. For one hundred points, a school sweater is awarded; for fifty points, a pin. Each sport has a manager elected by the association, which has served to forward that sport, and a very bright future is predicted.

OFFICERS

Anita O'Connor	*President*
Mary Zarobsky	*Vice-President*
Vivian Schmucker	*Secretary-Treasurer*
Mildred Spencer	*Head of Hockey*
Amelia Schade	*Head of Tennis*
Mable Alexander	*Head of Basketball*
Mary Zarobsky	*Head of Hikes*
Helen Hester	*Head of Swimming*

Senior Basketball Squad

GLENN SHERIFF, *Captain*
E. BARRET
H. STONE
M. BECHETL
H. WALTERS
E. COX
E. HOBE
F. INSKEEP
I. FRIEDMAN
A. O'CONNOR
F. ROBERTS
A. WIRTH

Junior Basketball Squad

Lois McCombs, *Captain*
M. Alexander
D. Auerswald
M. Danley
B. Murphy
A. Gumbert
A. Shade
V. Schmucker
M. Spencer
D. Turkle
M. Zarobsky
U. Sloan

Sophomore Basketball Squad

ELEANOR FOSTER, *Captain*
A. SHEPPARD
J. AIKEN
M. LITTLE
I. WINNER
M. SMITH
M. HILLER
M. McCOMBS
B. DOTTERWAY
V. BARR

GIRLS DORMS
HOW TO VAMP THE VICTIM
HARRIET HYDE

Forbes Hall

Forbes Hall—the dorm with a reputation—that is, of course, a reputation for good times and "unbroken rules". Even if we are quiet and demure, we're never in the dark about anything, except when our bill is so high that the school finds it necessary to turn the lights out for us. But when those lights are turned on, we surely are a blaze of glory—ever notice that we have lights on the outside as well as inside? It's too bad we didn't have the extra lights last year to break up the parties mentioned in the *Puppet*. (For further reference see "Beau" Burke.)

When it comes to popularity, we head the list, for whoever heard of a man coming to any other dormitory at two A. M., just to say "Good morning"? It wasn't the milkman, either!

Our doorbell and telephone are heard constantly. The high average of "love epistles" with special delivery stamps attached cost so much in batteries and loss of sleep that a special fund was proposed to meet the expense.

The monthly parties have been a howling success this year. Dances which were proper from a social standpoint were nevertheless quite popular, and the general opinion is, that "a good time was had by all".

Mellon Hall

With a whoop and a bang, Mellon Hall is again filled with merry Freshmen, Freshmen-conquering Sophomores, semi-serious Juniors and very serious Seniors. In the third year of Mellon Hall's existence, on October 4th, the few peppy Sophs rallied the Freshmen and compelled them to pray for rain. They regretted this, because shortly after we had rain for nineteen consecutive days!

An effort will be made to add to the collection of Webster. The words recommended are Horsecollar and Apple of my eyebrow, expressing respectively, disgust and admiration.

As inmates of Mellon Hall, we have been recipients of many joys, but a tragedy occurred recently. The reign of Rupert II, whose palace was in second floor rear, terminated with his execution in a rat trap!

Paths to sylvan dells may be muchly frequented, likewise those to a hidden cellar, but there never was a path so well-trodden as the one leading to the land of chocolate bars—Hibbie's room!

Mellon Annex

Mellon Annex is more familiarly known, no doubt, to the students of this institution as "The Stable." Starting at the steps of Margaret Morrison, one is overwhelmed by the extreme simplicity and beauty of its architecture. One is even more impressed as he climbs the steps one by one,—also more overwhelmed. This is the one dorm on the campus where *all hour* rules are observed. Its lighting system is worthy of mention, provided you speak in whispers. The shining lights in the driveway are just as popular (?) as the shining lights inside.

Although our chaperon, Miss Ruthrauff, finds her protégées a bit unruly at times, she always understands and will always be remembered.

Woodlawn Hall—Section 1

The Woodlawn Dormitory, which made its initial appearance this year, has already acquired the attributes which make a jovial abode for fair young ladies—namely, mice, matrons, men and music. Living in separate houses, one might think our friendships would be hampered, but the effect of gathering around "the congenial board" at 5151 has put a stimulus to our associations which might be termed "Divided we live; together we fall"—figuratively speaking—"fall to eating!"

But now I ask you, haven't we the grandest place to live? Gay young lads pass every hour of the day as well as the night. And you ask if they all pass? Well, hardly! Step into the corner house some Sunday afternoon. Oh yes! tea with lemon at four-thirty. However, don't venture up to the third floor, better known as the "barn". That is where we keep the wild animals, including squirrels, prunes, and social workers. We feed them toast and catsup.

Didst gaze in the windows the night of our Hallowe'en dance? Don't be jealous, young man. Send us some violets, and we will invite you to the next dance. But here is a warning —do not come around when we are studying! Of course, we study! You should hear our austere discourses on "Social Work at the Rittenhouse," or "Twelve Reasons Why Employers Should Marry their Secretaries."

Woodlawn Hall—Section 2

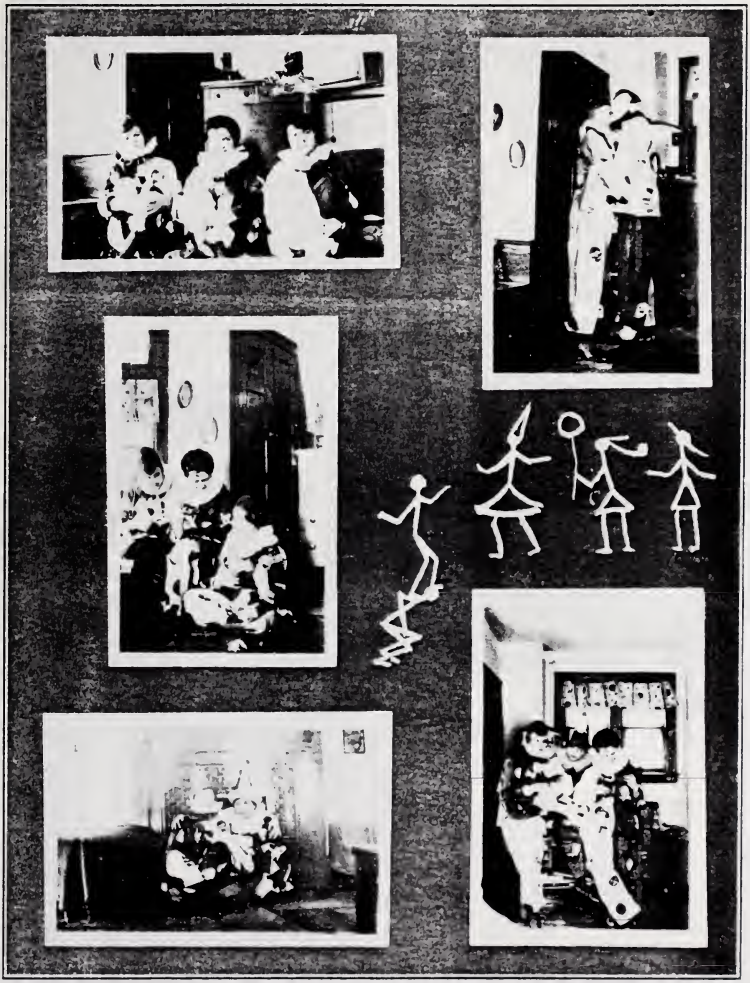
Another famous "Three in One" production is offered to the public! From the corner—ignore two houses, skip one, count three and you have it—the second section of Woodlawn Hall! Regard us well, gentle reader.

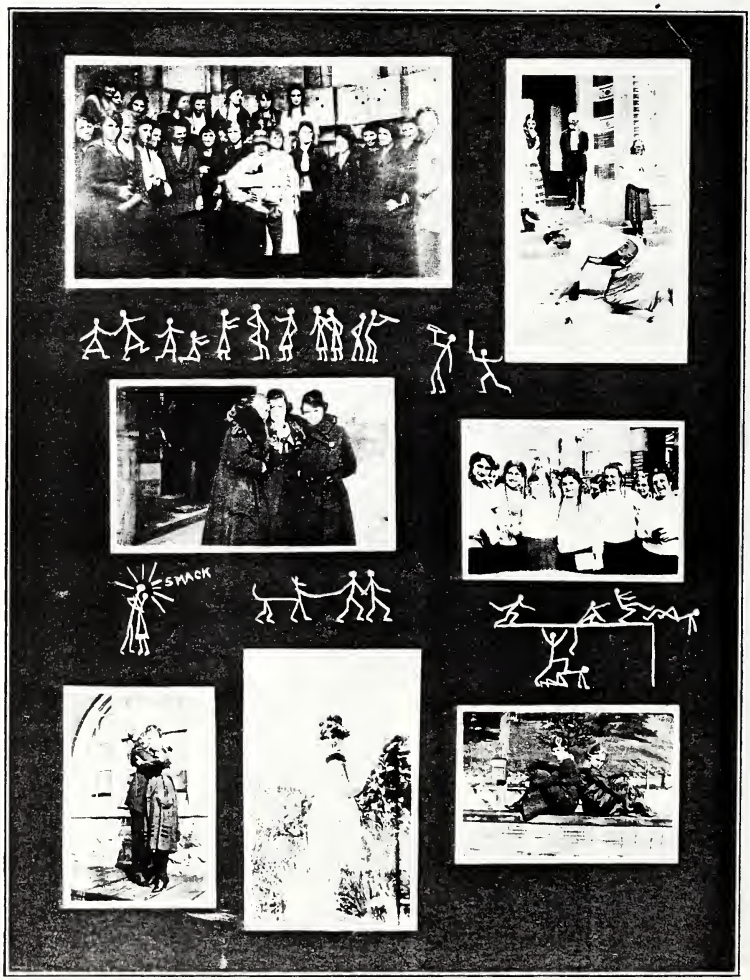
Renouncing perforce many material blessings, as for example, living rooms, telephones, study tables, waste baskets, and heat, we are far above the average spiritually, and exceeding great in ingenuity.

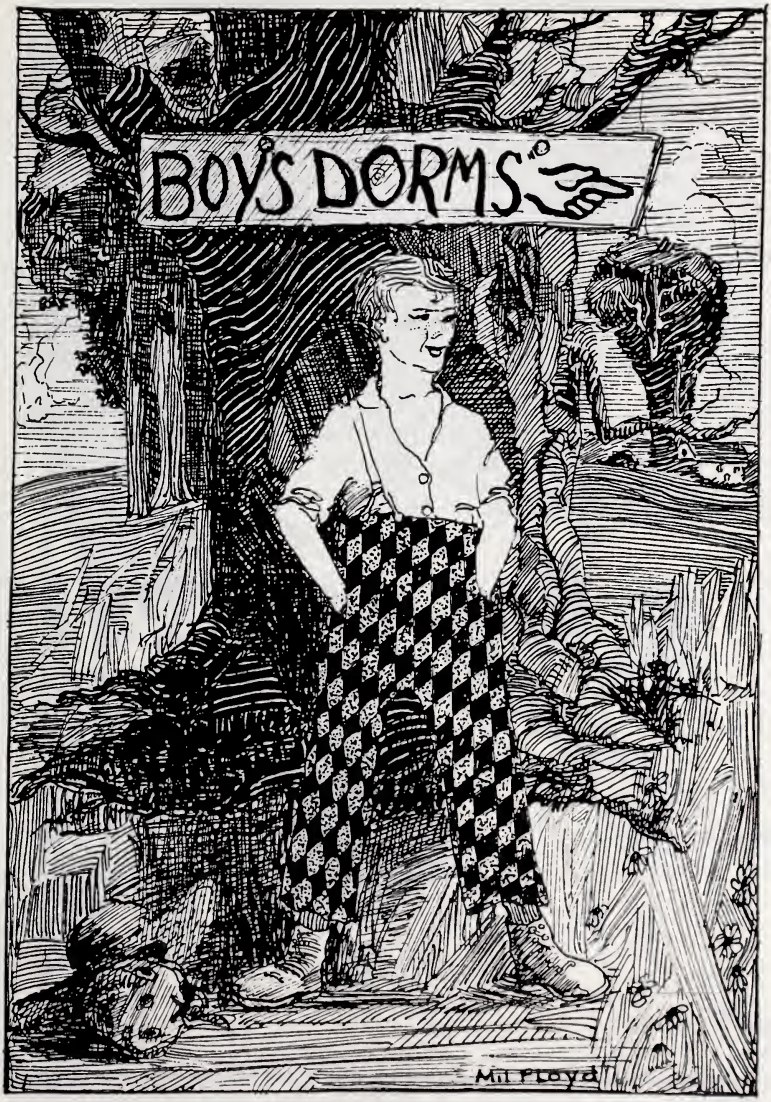
We have developed a stoic and Eskimo-like indifference to cold; we strive to make up for lack of furniture by sheer force of personality; we blithely deposit refuse in the hall; we use the mantelpiece to study from; we scorn pianos and victrolas and resort to our individual vocal endowments.

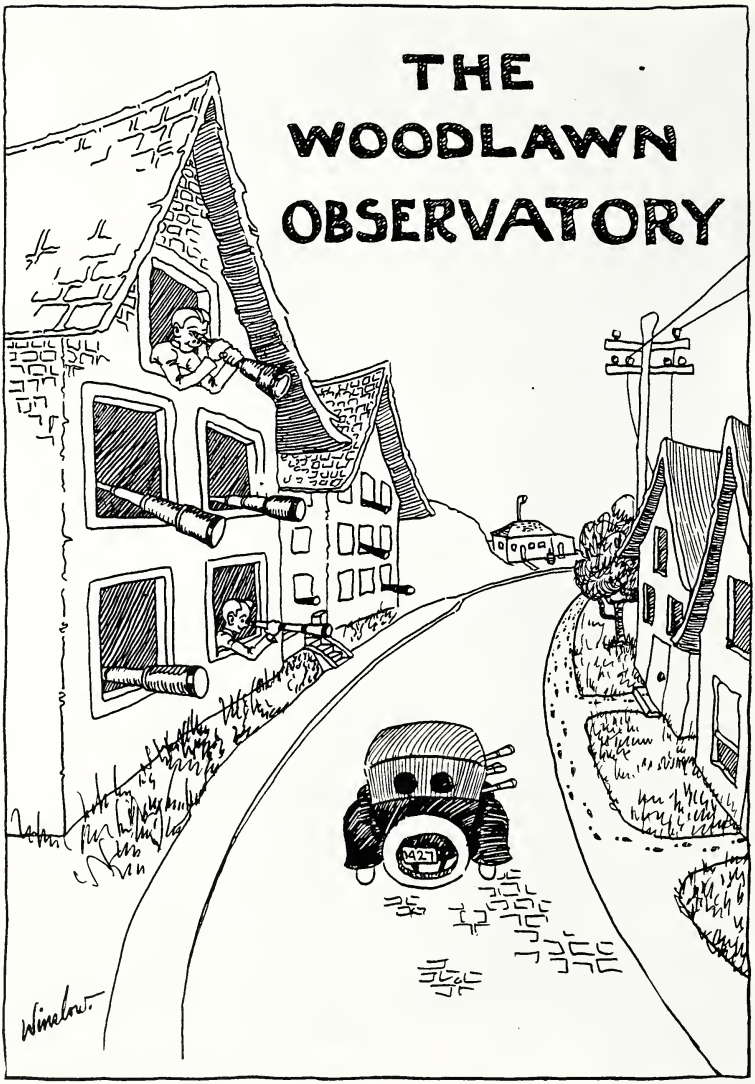
Then too, we use the corner house for dances and have the soul-satisfying thrill of knowing that our otherwise more favored colleagues are hanging longingly and perilously over the banisters watching the revel.

If we survive the rigors of winter, it can go down in the records as a happy year, for as you notice, we're "Smilin' Thru."




SMACK


BOY'S DORMS
Mil Floyd


THE
WOODLAWN
OBSERVATORY

DORMITORY No. 1

OFFICERS

E. E. Flynn	*President*
T. J. Jendrasiak	*Vice-President*
L. A. Yoder	*Treasurer*
E. A. Brand	*Secretary*

DORMITORY No. 2

OFFICERS

C. B. Bryant	*President*
D. S. Harding	*Secretary and Treasurer*

DORMITORY No. 4

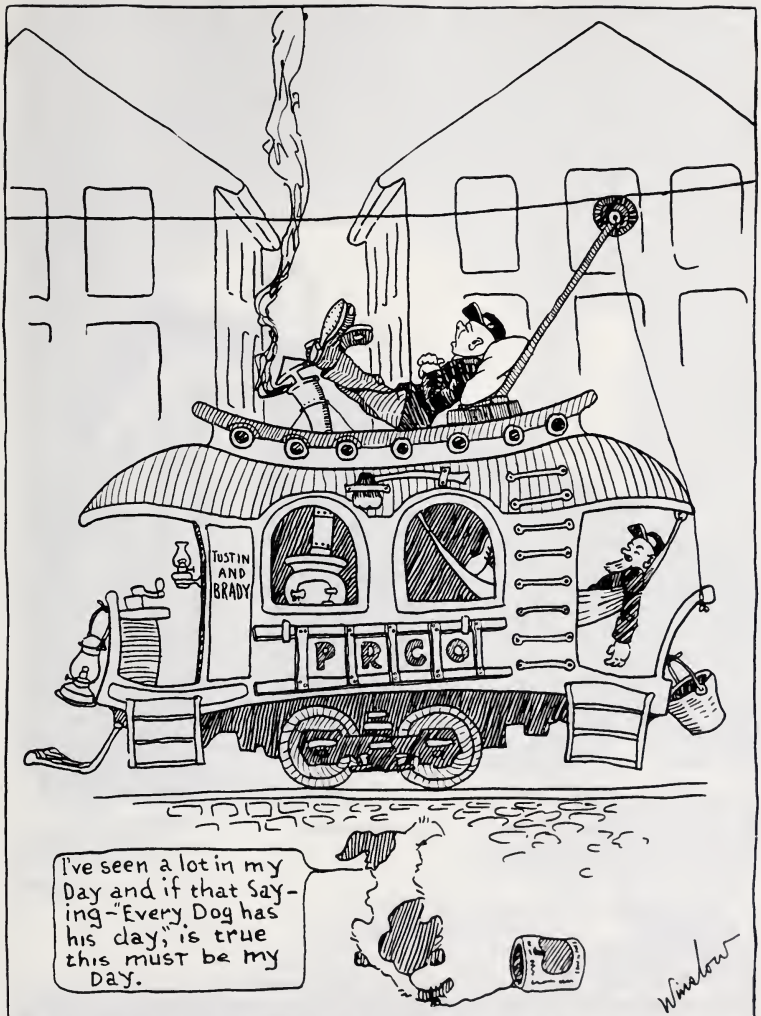
OFFICERS

J. L. McCULLOUGH	*President*
C. J. COPELY	*Vice-President*
H. R. TUMIN	*Treasurer*
A. ROSENGARTH	*Secretary*

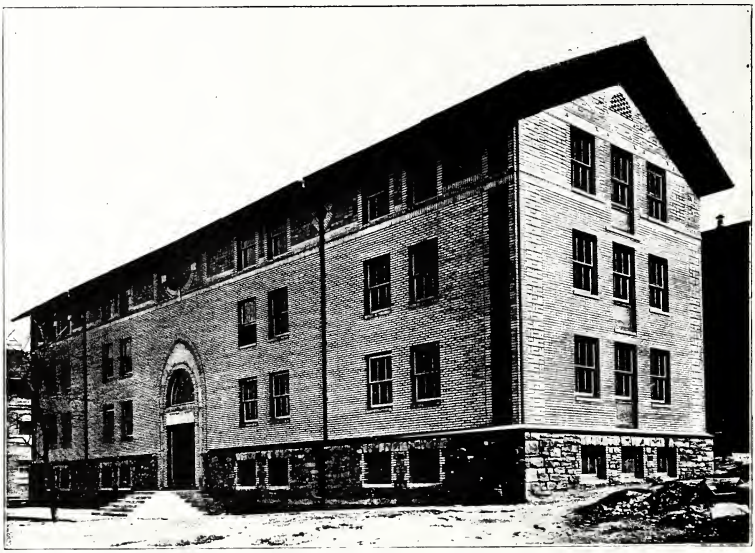
DORMITORY No. 6

OFFICERS

D. W. DuVall	*President*
Perry Campbell	*Vice-President*
F. L. Knowles	*Secretary*
R. C. Corderman	*Treasurer*

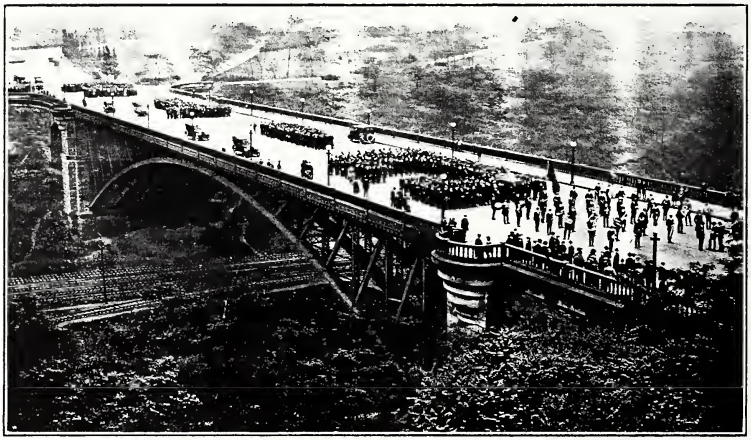


"YE OLD WOODLAWN CANNON BALL"



ONE OF THE NEW DORMS

ACTIVITIES



Drama

Plays given in the "Little Theatre" in the year 1919-20

Play		Author
October		
Queensland Quoits		Howard Forman Smith
The Portrait of a Policeman		Sara E. Bennett
The Land of Heart's Desire		W. B. Yeats
The Well of the Saints		Synge
November		
Mary's Lamb		Hubert Osborne
Back of the Yards		Thomas Sawyer Goodman
The Nursery Maid of Heaven		Thomas Wood Stevens
Blackberrying		Howard Forman Smith
Riders to the Sea		Lady Gregory
December		
Three of Us		Rachel Crothers
January		
Dust of the Road		Thomas Sawyer Goodman
The Bracelet		Sutro
Double Dyed	Dramatization by	Kenneth Thompson and Owen White
Betty Jumel	Dramatization by	Owen White
February		
Opus I, Sunday for Dinner	Dramatization by	I. D. R. Hazel
The Phantom Bride		James Daly
Rainald and the Red Wolf		Thomas Wood Stevens and Thomas Sawyer Goodman
Trelawney of th Wells		Pinero
March and April		
John Gabriel Borkman (Mostly Graduate Cast)		Ibsen
The Admirable Bashville		Shaw
Everyman		Stevens
The League of Youth		Ibsen
A Man Can Only Do His Best		Thomas Sawyer Goodman
A Shakespere Play		

The Extravaganza

Bohemia Unlimited—The Intimate Musical Extravaganza—doesn't that speak for itself?

It was Bohemian, of course, for the Division of Arts had to live up to its reputation. Limited or Unlimited, as you like, it wasn't really fast, though it covered a lot of space in one short evening. It wasn't really unlimited, for there was a limit, though some might not have noticed it. There was lots of intimacy in it. Remember the soloist and the Eskimo Babies, but above all, the intimate way in which Buck spoke to the stage hands.

The idea originated with the Drama Department—they planned the whole thing—and Buchanan, White, Smith, and Church wrote the book. The leading parts, speaking, singing, and dancing, naturally fell to the Drama students, though Mr. Colette and Mr. Saliers put on a clever French sketch. Drama also furnished most of the scenery, but the Decoration Department lent its time and talent in the making of the Chinese drop, and the Architects, with Mr. Saliers, made part of the setting for the Nile and the Pierrot scenes.

Hans Muller made the costumes. That was a show in itself! Beginning about two weeks before and lasting up to the very night of the performance. In a little room up by the Loge, fitted out with four sewing machines and a couple of work tables, Hans reigned supreme. He bought, planned, cut out and directed, also did a great deal of the other work, while volunteer workers stenciled and sewed under his directions.

The Music Department furnished original music to meet all demands, and the orchestra to go with it, and the whole school was drawn upon for odds and ends, such as "niggers," chorus girls, and advertising managers.

Most of the Techites saw Bohemia Unlimited, so there is little that needs to be said. It was played on November 21st and 22nd to a full house both nights. It took its audience on a round trip ticket through the land of Jazz, China, Japan to Iceland, and back by way of Egypt, Arabia, and Venice; with lots of singing and dancing and good-looking chorus girls.

It would hardly be fair to relate the touching little tragedies of the dressing rooms, such as one costume missing and the chorus already called, but if the audience enjoyed the whole thing as much as the actors did, the nice things they said must be true.

No one who took part in the Extravaganza could forget the dress rehearsal. It was a cold night, outside and in. One could see Egyptian Maidens and Eskimo Babies huddled together over a radiator, awaiting their time to go on. Everything had to be repeated until it was just right. After physical encouragement of sandwiches and coffee, served at midnight, the second act began. This lasted the rest of the night, and it was a sleepy-looking bunch who left the Schenley at five-fifteen A. M.

The Des Moines Student Volunteer Convention

WE were well represented at the Des Moines Convention which was held from December 30, 1919, to January 4, 1920. The Y. W. C. A. at Tech sent the women delegates and the churches of Pittsburgh sent the men. Our delegation left Pittsburgh in a special car along with the delegates from Pitt and P. C. W. The entire group made merry the whole trip and had a real good time.

Almost every college in the country was represented at the convention, and forty countries sent their delegates. Our delegates let the people know where they were from by Tech songs, yells, and by wearing the plaid arm-bands. The convention was purely of a religious type, and many prominent speakers, including famous missionaries, were present. A great deal is expected from the delegates in the moral betterment of Tech.

Those who made the trip included:

From M. M. D.

Miss Lenora Honecker	Miss Mary Bechtel	Miss Eleanor Cox
Miss Eleanor McCarson	Miss Gladys Ramsey	Miss Lillian Coleman

From Science, Industry and the Arts

Mr. Geo. T. Miller	Mr. LeRoy De Pre Fontaine	Mr. Roy D. Foxon
Mr. J. B. Carvalho	Mr. Kenneth McAlpine	Mr. C. M. Muir
Mr. C. B. Schmidt	Mr. LeRoy Emerich	

JUNIOR PROM
M·F·Murdock

The Junior Prom

COMMITTEE

C. T. McClean	*Chairman*
C. B. Schmidt	*Secretary*
H. G. Nicols	*Treasurer*
L. D. Pitts	R. E. Dake
J. G. Todd	H. W. Lynn

ONE feature which distinguished this Prom from those that preceded it, is that this was the first to be held in which all three of the men's schools participated. It is hoped by the entire class that this will set a precedent that in future years will become a custom.

There had been twelve Junior Proms at Tech up to February 20, 1920, when the Class of 1921 added this one, which made the thirteenth. However, the Thirteenth Prom will never go down in the memories of the one hundred and fifty couples that were present as an unlucky evening. The only bad luck suffered was by those who did not attend.

The ballroom of the Schenley Hotel was taxed to capacity, and the reception hall served many as a less crowded place to dance. At nine o'clock the Grand March swung down the center of the ballroom, and the Prom was officially opened. From that time till the last strains of the Home Waltz died away at two o'clock there was not a dull moment. At midnight, dancing was stopped for a half hour, when a delicious supper was served in the adjoining dining room. Two other intermissions during the evening were filled with exhibition dances. A Favor Dance caused much extra amusement, while a myriad of colored balloons and paper streamers added much to the gaiety.

The decorations of the ballroom were simple but tasteful, and the reception hall was decorated with many palms and ferns that formed attractive bowers in which comfortable divans and cushioned chairs furnished delightful places in which to rest and watch the dancers.

CARNEGIE TE
1919 PROM
SCHENLEY HOTEL
1920.

M. M. D. Junior Promenade

THE Prom was coming! From the very first day of school, plans had been laid; improvements over past Proms suggested; the date, the 5th of March, selected; the place, the Schenley ballroom, secured; in short, everything that a willing and worthy committee could do had been done.

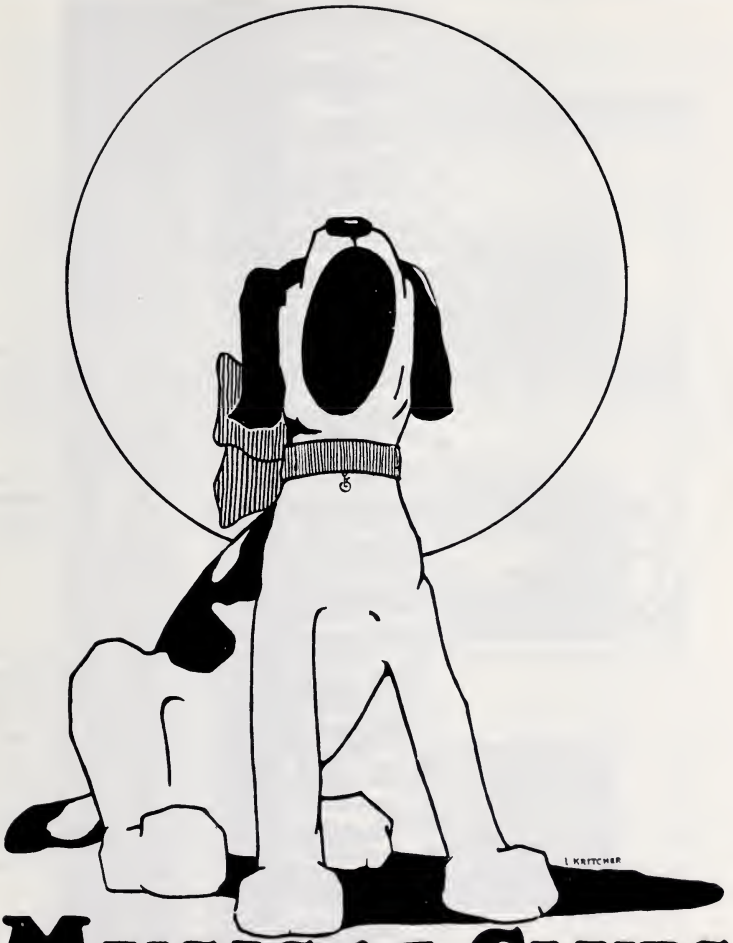
The Prom was on!! From the opening of the affair with the Grand March to the last strain of the Home Waltz, all cares and worries were buried, all lessons forgotten. Joy reigned supreme.

The Prom was over!!! But never will it be forgotten by any of the Juniors, who, one and all, worked so faithfully to make it the success it was; or by any of the Seniors, who enjoyed so fully the fruits of their hostesses' labor.

When memories of school days and school fun are dimmed, and later and bigger things take the prominent place, the one memory of those fortunate enough to have been there, that will outlast all others, will be that of the Promenade of the Class of '21 of Margaret Morrison.

COMMITTEE

Louise Irwin . . .	*Social Chairman*
Vivian Schmucker	Agnes Russell
Amelia Schade	Bess Murphy



MUSICAL CLUBS

Carnegie Musical Clubs

MEMBERSHIP

EXECUTIVE COMMITTEE

President,	John F. Sweeny,'20	*Publicity Mgr.,*	G. L. Jordy,'22
Manager,	J. A. Willard,'23	*Stage Mgr.,*	C. H. Carney,'22
Asst. Manager,	M. H. Mawhinney,'21	*Librarian Glee Club,*	H. A. Bliss,'21
	Librarian Mandolin Club,	J. A. Hiller,'22	

GLEE CLUB

Director, Robert M. Crawford — *Accompanist,* H. H. Burdick,'22

FIRST TENOR

Burch, C. M.	'22	Holmes, F. S.	'23	Blenko, W. T.	'21
Dunham, R. B.	'22	Shellenberger, H.M.	'20	Welsh, L. E.	'20
Harpel, D. S.	'20	Simpson, P. F.	'21	Seeback, L. G.	'22
Hart, W. R.	'22	Slattery	'23	Carney, C. A.	'22
Onions, R. C.	'22	Jordy, G. L.	'22	Hott, L.	'20

SECOND TENOR

Hinkley, T. R.	'21		
Toler, R. M.	'23		
Agnew, T. W.	'21		
Gannon, P. C.	'23		
Burchard, W. K.	'23		

BARITONE

Bliss, H. A. B.	'21	Tucker, G. E.	'22	Micheltree	'22
McMahon, J. B.	'21	Schumacker, C. J.	'22	Anthony, B. F.	'21
Kreidler, R. L.	'20	Walden, W. A.	'20	Kerr, A. J.	'20
Infield, D. H.	'22	Turcotte, L. A.	'23	Ackerman, D. E.	'23
Stewart, S. P.	'20			Grice, W. L.	'23

BASS

Micheltree	'22	Sanhill, R. R.	'23
Anthony, B. F.	'21	Pribick, C. C.	'20
Kerr, A. J.	'20	Hubbard, J. S.	'21
Ackerman, D. E.	'23	Taucet, W. K.	'20
Grice, W. L.	'23	Parsons, E. J.	'23
Knorr, A. J.			

MANDOLIN CLUB

Director, Sgn. Gregario Scalzo — *Student Director,* S. F. Koauch,'22

FIRST MANDOLIN

Craighead, G. F.	'23
Harkness, J. C.	'21
Hiller, J. A.	'22
Knapp, H. C.	'21
Kossler, W. J.	'21
McNamara, P. S	'21
Osler, G. G.	'23
Olsen, V. C.	'23
Rinehart, F. H.	'22
Marsteller, L. O.	'23
Russell, E. M.	'23

SEC. MANDOLIN

Allen, R. E.	'23
Bollinger, F. E.	'22
Israel, C.	'22
Kavanaugh, C. P.	'23
Lucas, R. S.	'22
Lurie C.	'22
Meurer, S. T.	'23
Peterson, C. E.	'21
Rodzinsky, S. M.	'21
Rohenault, W. T.	'21
Kaplan, J. A.	'22

FIRST VIOLIN

Brown, G. H.	
Funk, W. C.	'22
Heinle, F. J.	'20
Kovach, S. E.	'22
Stickle, J. B.	'23
Wally, F. C	'23

SECOND VIOLIN

Beck, A. L.	'22
Henderson, G. A.	'22
Miller, L.	'23
Stroble, C. K.	'21
Sumpter, J. E.	'23

GUITAR

Baggaley, R.	'22
Cost, R. W.	'20
Little, C. K.	'20
Mawhinney, W. H.	'21
Sweeny, J. F.	'20

FLUTE

Carrier, B. R.	'23
McCurdy, J. P.	'20

CLARINET

Kendrick, A. G.	'23

MANDO-CELLO

Smith, G. W.	'21

MANDOLA

Willard, J. A.	'23

DRUMS

Taylor, E. C.	'22

EXECUTIVE COMMITTEE

Home Concert Program

PART ONE

1. (a) Amici — *C. I. T.*
   (b) The Sword of Ferrara — *Bullard*
   GLEE CLUB
2. The Tournament March — *Sullivan*
   MANDOLIN CLUB
3. Mary's Little Wise Man — *Cutter*
   GLEE CLUB
4. Reading — *Selected*
   MR. J. A. WILLARD
5. Blues — *Selected*
   BANJO QUINTETTE
6. Solo Voice — *Selected*
7. The Golden Scepter Overture — *R. Schlepegrell*
   MANDOLIN CLUB

PART TWO

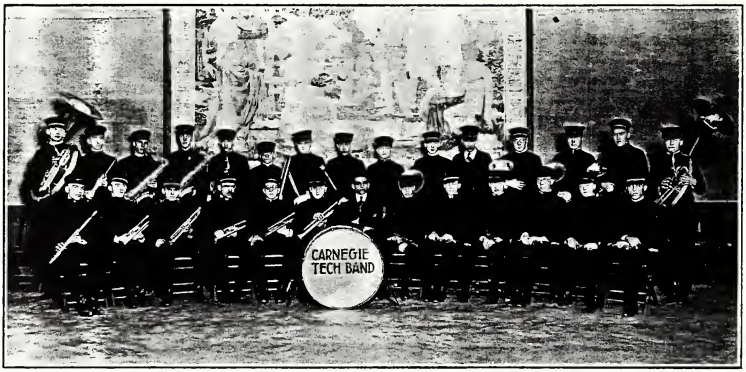
8. Three for Jack — *Squire*
   GLEE CLUB
9. A Dream — *Bartlett*
   MANDOLIN CLUB
10. The Sweetest Flower that Blows — *Hawley*
    MALE QUARTETTE
11. Minuet — *Beethoven*
    MANDOLIN CLUB
12. Laughing Song — *Kratz*
    GLEE CLUB
13. Selection from "What's the Odds" — *Tilzer*
    MANDOLIN CLUB
14. (a) Recessional — *DeKoven-Kipling*
    (b) Alma Mater — *C. I. T.*
    GLEE CLUB

The Fifteenth Season

THE keynote of the Musical Clubs' spirit for the past season was struck at the initial tryouts in October, when one hundred and fifty men put in their appearance. All of these men were mighty good Musical Clubs' material, and it was the regret of the directors that they were not authorized to choose two clubs instead of one. The two clubs wasted no time, but started in on a severe period of training for the commencement of the season with a zest that augered well for the management's cherished hopes. A very delightful smoker was given in order that the men might become better acquainted, and was enjoyed by all.

During the months of December and January, concerts were given at Mayview, East Liberty, Wilmerding, and Greensburg. These preliminary concerts had not been wasted. On February eleventh the clubs started on one of the most enjoyable trips taken within the memory of any of the veterans. This trip included Erie, Youngstown, and Akron, and the clubs have nothing but good to say of the wonderful spirit displayed by audiences in these places. Following several more local concerts, the Fifteenth Annual Home Concert and Ball was given at Carnegie Music Hall and Syria Mosque. A large and appreciative audience heard the Home Concert and it was largely due to their co-operation that the concert was so enjoyable. In a word, Carnegie Tech spirit presided over the events of the evening. Following the Home Concert were more concerts, the principal ones being those at Pennsylvania College for Women, Latrobe, and Allegheny.

In conclusion, the Musical Clubs wish to formally express their appreciation for the patience and loyalty of the two directors—Signor Gregario Scalzo, Director of the Mandolin Club, and Mr. Robert Crawford, former Glee Club star and now Director of the Glee Club. Too much credit cannot be given to these expert leaders, and the members of the Musical Clubs unite in thanking them for their services during the past season.



OFFICERS

Dominic Caputo	*Director*
H. A. B. Bliss	*Manager*
A. Kendrick	*Assistant Manager*
J. J. Rudisill	*Secretary and Treasurer*
H. G. Culin	*Librarian*
E. C. Taylor	*Business Manager*

PERSONNEL

Cornets

O. Aton
M. H. Baney
R. Dunham
J. F. Gloechner
P. Kilbourne
J. S. Konnerth
S. Parembka
J. Stevenson

Clarinets

R. W. Arnold
A. C. Carrao
A. E. Horn
A. Kendrick
F. Knowell
C. Peterson
A. H. Prey
K. L. Schnell

Altos

D. Duncan
W. Robenault

Saxophones

H. W. Bryan
A. Collins
D. H. Infield
M. E. Van Sickle

Piccalos

J. D. Grassel
J. S. Wood

Bass

J. J. Rudisill
G. C. Smith

Baritone

H. A. Bliss
F. O. Stebbens
J. F. Reploglan

Trambanes

E. H. Floyd
L. De PreFontain

Snare Drum

H. G. Culin
E. Taylor

Bass Drum

E. Wendels

Cymbals

H. Rinehardt

BAND OFFICERS

The Carnegie Tech Band

The band has been placed under the supervision of the Division of Arts this year. It has been done only at a great expense by the Student Activities Board.

Private instruction is given to every man. Every instrument is furnished by the school. Never before have such inducements been offered to band-men.

The band made several extensive trips during the year, the longest being the Cornell Football trip. No man who took this trip, will ever forget the times on the "Constantine", and the way that band did play! Another excursion was made down to W. & J.

Margaret Morrison Musical Club

Harvey Gaul	*Director*
Jean Eakin	*Manager*
Mary Zarobsky	*Assistant Manager*
Marion McCombs	*Secretary-Treasurer*
Helen Hester	*Librarian*
Lenore Davis	*Accompanist*

FIRST SOPRANOS

Thelma Adams
Charlotte Kahler
Mary Louise McCaughey
Dorothy Petgen
Frances Roberts
Margaret Smith
Frances Bonner
Mary Little
Mary McCloskey
Willa Pickford
Ruth Schenk
Victoria Vodila
Elizabeth Wright

SECOND SOPRANOS

Mary Bechtel
Mary Hice
Betty Laughlin
Bessie Murphy
Marion McCombs
Dorothy Turkle
Sarah Henderson
Eleanor Kerr
Florence Lutz
Lois McCombs
Gladys Ramsey
Mary Zarobsky

FIRST ALTOS

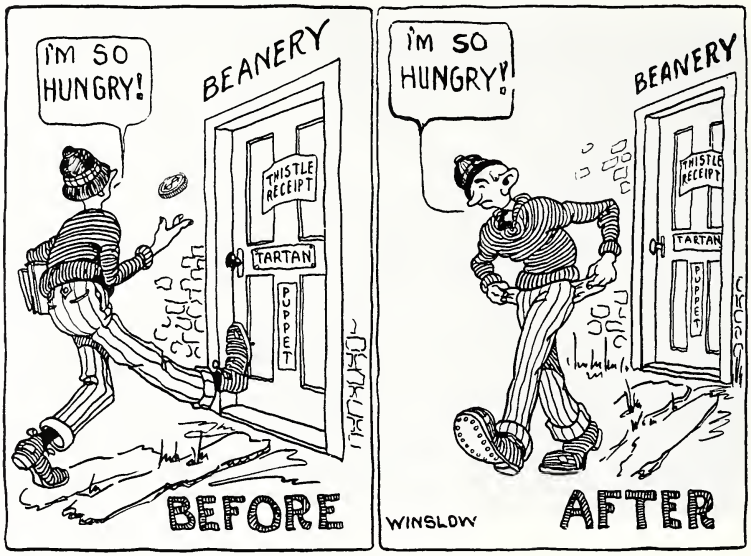
Miriam Armour
Barbara Endres
Helen Lewis
Pearl Obenour
Margaret Smith
Helen Doverspoke
Margaret Kimmel
Dorothy Mong
Gladys Richmond
Mabel Snyder
Helen Hester

SECOND ALTOS

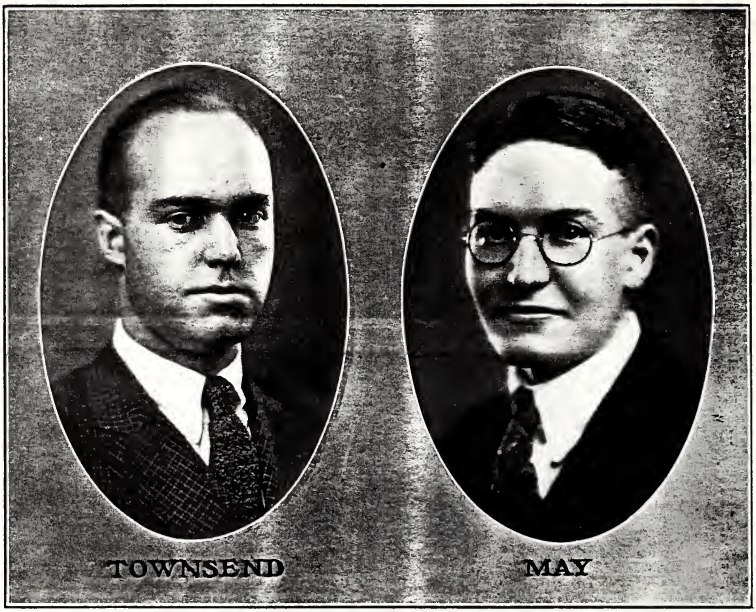
Jean Eakin
Mary Walker
Rhoda McCloskey
Josephine Whitney

The Stringers

Have you ever heard the "Stringers"? Or rather the "Springers"! That was a likely mistake the cheer-leader made, for they sure did "spring". They made their debut at General Assembly on January 28th, and evidently satisfied their audience. Talk about jazz boys! Why, when they start ragging some of their music at Monday afternoon practice, they're simply irresistible! And when they wind up with some of their "sob-stuff", as Mr. Gaul puts it, the very hardest Maggie Murph is moved to tears. Three cheers for the "Stringers"—let's go!


I'M SO HUNGRY!
BEANERY
THISTLE RECEIPT
TARTAN
PUPPET
BEFORE
I'M SO HUNGRY!
BEANERY
THISTLE RECEIPT
TARTAN
PUPPET
WINSLOW
AFTER

?
PUBLICATIONS



1920 Thistle Board

Richard E. Townsend	*Editor-in-Chief*
Albert C. May	*Business Manager*

ASSOCIATE EDITOR
Mary M. Danley

Mary Frances Murdoch	*Art Editors*
Lawrence Kritcher	
C. T. McClean	*Sales Manager*
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R. F. Warner	*Assistant Sales Manager*
Edith A. Laughlin	*Assistant Photographic Editor*
C. B. Schmidt	*Athletic Editor*
R. D. Feltyberger	*Assistant Athletic Editor*
Luther S. Lashmit	*Fraternities*
L. R. Nusbaum	*Classes—Arts*
Lois Cochrane	*Activities—Arts*
Margaret Griffin	*Organizations—M. M.*
Olga Kiefer	*Classes and Dorms—M. M.*
Frederick W. Agnew	*Organizations*
John Keelan	*Advertising Manager*
F. H. Fanning	*Science Night Representative*
Robert S. Craig	*Industry Night Representative*
Rosamond Bruce	*Arts Night Representative*
Craig R. Spicher	*Faculty Adviser*

1920 THISTLE
SCHMIDT
MURDOCK
AGNEW
DANLEY
LASHMIT
MACLEAN
SPICHER
GRIFFEN
KNITCHER
KIEFER
NUSBAUM
WARNER
RUDISILL
LAUGHLIN
FELTYBERGER
FANNING
KEELAN
COCHRAN
CRAIG

The *Tartan* started the present school year with everything set for a good year. Everything went well, and again the *Tartan* has set a good mark for other activities to follow.

The space for news was limited on account of the very high price of printing and engraving. The result of this high price of printing was seen in the fact that it was necessary to run too much advertising in order to make the *Tartan* a self-supporting activity. The policy of the paper this year has been to boost student activities and to encourage all things that foster true Tech Spirit. Whatever may have been said about the *Tartan* must stand, but certainly the staff has done its best, and it is hoped that the students in general will co-operate in making it a bigger, better and more "newsy" paper next year.

The Tartan Staff

LeRoy E. Emerich . . . . . *Editor-in-Chief*
T. W. Allsworth . . . . . *Business Manager*

EDITORIAL

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L. K. Paquin

Assistant Managing Editors
C. L. Lake
F. I. Smith

News Editor
J. T. Ames

Associate News Editor
W. D. Hall

Athletic Editor
G. R. Goodrich

Assistant Athletic Editor
Fred L. Knowles

Circulation Manager
H. G. Atchley

School Editors

Margaret J. Griffen	*M. M. C. S.*
J. K. W. Macalpine	*Science*
J. J. Rudisill	*Industries*
T. R. Hinckley	*Arts*

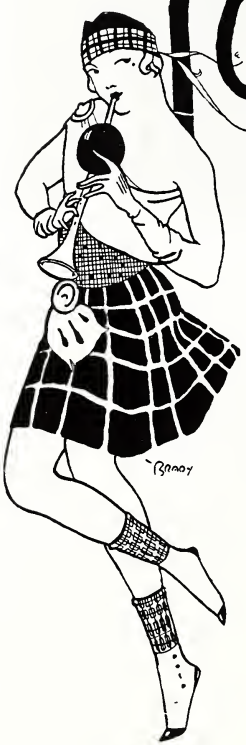
Other Assistants
L. A. McCardell
Arthur Lubin
J. R. Parrow
Gertrude Baton
Margaret Stolzenbaugh
Adele Gumbert
Olga Kiefer

BUSINESS STAFF

D. A. Sillers
Wm. Obenour

Advertising Manager
M. I. Cohen

Puppet



Just after Peter Piper picked his peck of prickly peppers, and the Ragged Rascal ran 'round the rugged rock, and the Cabbage Cook cleaned the calloused crockery, and the Perfect Plebe proposed to Pretty Pansie, and Savage Science sang to Sweet Salome, after Idle Industries incurred intense Intolerance and Drear Design doled out the deadly drops, then Artful Arthur aimed his ample apple with a wobbling wily withering wing. When football fans fared fondly frantic, when winter's wares were worn without a whimper and the sleet and slush slid slowly thru the stolid student's Stetsons, when the fat and freakish females galloped gladly in galoshes, then the gawkish grinds ground grimly thru the trying tempting tests. When the blooms burst back to blossom and the lonesome lover learned of Leap Year, then the scared Senior sought slide-rule safely. Thru all these things and more unmentioned, *Puppet's* smile was never wan.

PUPPET STAFF

Wm. M. Burke	*Editor-in-Chief*
C. T. McClean	*Business Manager*
Fred I. Smith	*Managing Editor*
Robt. W. Schmertz	*Art Editor*
Barney Goldstein	*Assistant Art Editor*

ASSOCIATE STAFF

W. J. Perkins
T. S. Repplier
D. F. Cassidy
W. J. Reilly

BUSINESS STAFF

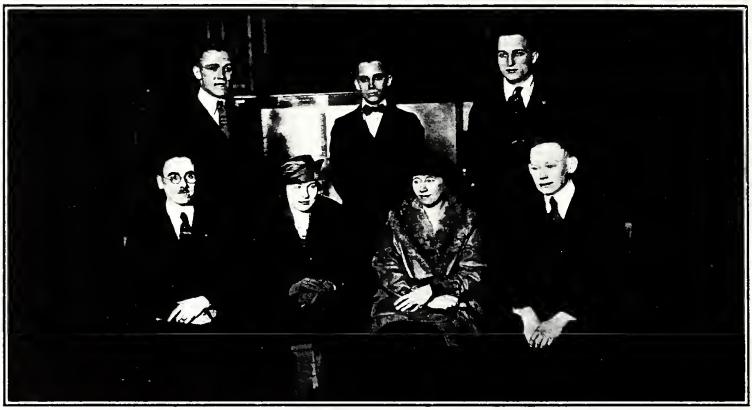
G. D. Martin	*Circulation Manager*
J. G. Byler	
Irving King	
R. E. Townsend	

ARTISTS

Mildred Floyd	
Harriet Hyde	
J. W. Fritz	
H. Stedfelt	
L. Stults	
Robert Dake	
A. B. McSwigan	*Contributing Artist*

Campus Scene, Carnegie Tech., Pittsburgh.
2913

STUDENT GOVERNMENT



Board of Student Activities

The Board is a branch of Student Government, its function being to supervise the managing and financing of various recognized non-athletic activities. These include the *Tartan*, THISTLE, Musical Clubs, the Band, and the Carnegie Union. All managers of these activities must present monthly reports covering their progress and finances.

The membership of the Student Activities Board is so chosen as to make it as truly representative as possible. It is believed that only through such a board can the activities of our institution be developed to their fullest possibilities.

PERSONNEL

DEAN TARBELL, *Faculty Adviser*

SENIOR MEMBERS

CONRAD A. STONE, Science, *President*
WM. H. OAKLEY, Industries
C. E. SILLING, Arts
HAZEL C. SCHAFFER, M.M.C.C., *Secretary*

NIGHT SCHOOL

J. E. DOBSON, Science
F. C. WILHARM, Arts

JUNIOR MEMBERS

LUTHER LASHMIT, Arts
C. B. SCHMIDT, Science, *Treasurer*
HARRY C. HAMMANN, Industries, *Vice-President*
SYLVESTER WILLIAMS, Science
MARGARET GRIFFIN, M.M.C.C.

ALUMNI MEMBERS

JAMES SPRAGUE, Science
M. SADLER, Industries
WM. KING, JR., Arts
MISS ELIZABETH KELLY, M.M.C.C.

The Student Council

The Student Council, which is a representative body of the four schools, is a governing board for the students, and acts on all matters pertaining to student welfare. It consists of eleven members—the President who is elected from the four schools; two representatives from each school; the President of the Senior Class and the President of the Senate; the President of the Activities Board and the President of the Athletic Association.

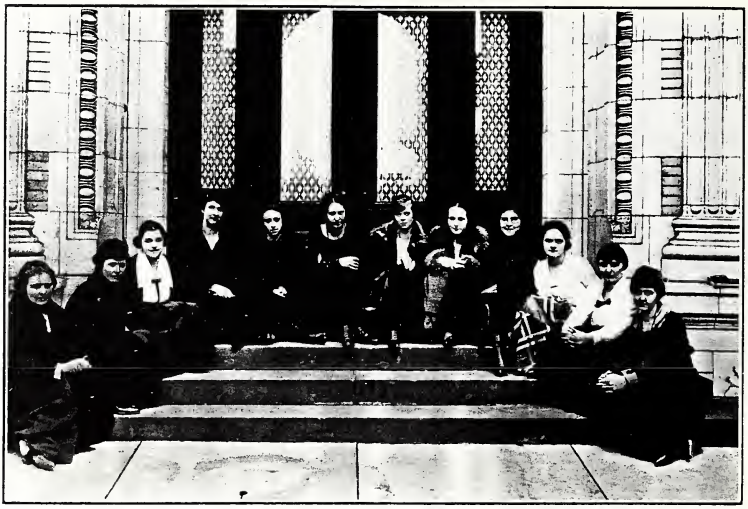
The council has had many problems of reconstruction and recognition. So far this year, plans have been made for a Home Coming Week to be held in May, and arrangements for Commencement Week are well under way. Monthly mass meetings are held, conducted by the council, at which time appropriate programs are rendered.

PERSONNEL

James W. Batman, Industries	*President*
Gilbert T. Heddaeus, Industries	*Vice-President*
Harriet Stone, M.M.D.	*Secretary-Treasurer*
Agnes Piper, M.M.D.	*Recorder*

W. H. Oakley, Industries	H. F. Bremmer, Arts
J. D. Beatty, Science	M. E. Green, Arts
Grant Stone, Science	C. A. Stone, Students Activities Board

R. W. Schemertz, Athletic Association



Student Senate—M. M. D.

The Student Senate of Margaret Morrison has become stronger each year since its establishment in 1913. The senate has jurisdiction over the conduct of the students as far as it is connected with the school, and has the power to enforce the penalties which it has recommended to the Faculty. To be enforced, these penalties must be ratified by the director.

The senate consists of officers elected by the student body of M.M.C.C., representatives elected from the four classes, the S. I. V. Class, and the presidents of the dormitories.

OFFICERS AND MEMBERS FOR 1919—1920

Harriet Stone	*President*
Mary Bechtel	*Vice-President*
Margaret Stolzenbach	*Secretary*
Agnes Russell	*Treasurer*

Barbara Endres, Senior Representative	Luella Smith, Mellon Hall and Annex
Mildred Spencer, Junior Representative	Oral Hepburn, Forbes Hall
Helen Ried, Sophomore Representative	Janet Rutherford, Woodlawn Hall, Section 1
Willa Pickford, Freshman Representative	Olga Kiefer, Woodlawn Hall, Section 2

Student Senate—Science

The Science Student Senate, the Student Governing Board of that school, was organized in the year of 1916-1917 for the purpose of furnishing a means of general regulation of student conduct, Freshman regulations, bulletin boards and club room. Much has been done this year toward instilling the old-time spirit into the Freshmen, a thing which was so lacking, due to force of circumstances, during the war.

PERSONNEL

Seniors

G. C. Stone, *President*
M. A. Fair, *Treasurer* J. F. Giffen
J. D. Beatty E. H. Pafenbach

Juniors

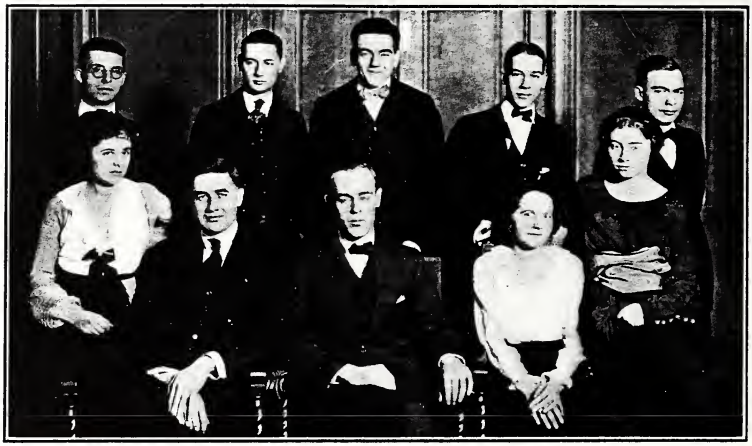
C. B. Schmidt, *Vice-President*
L. E. Hawkins, *Secretary* F. S. Bloom
E. A. Butts

Sophomores

H. D. Skyrm W. B. Cunningham
G. W. Curtis

Freshmen

G. F. Craighead



Student Senate—Arts

The Senate of the Division of the Arts is the judicial branch of the Student Government Organization. When created a number of years ago it was vested with executive and judicial authority, but has since cast aside the former, owing to the creation of other bodies upon which this duty has fallen. It acts as a medium between the Faculty and the student body, and makes and transfers suggestions to both. It decides all questions of violations of school laws and also rules on all questions not fully covered by them.

The senate is made up of one person elected from each class and one from each department at large. Those departments having women students are required to have at least one woman on the senate.

M. Edwin Green	*President*
Stanley P. Stewart	*Vice-President*
Ellen B. Crowe	*Secretary*
John G. Todd	*Corresponding Secretary*
J. N Franklin	Mary F. Murdoch
A. A. Schoepf	Edwin M. Stultz
Alexander L. Buchanan	Vivian Ruse

Charles Krane

Executive Council—Industries

The Executive Council of the Division of Industries consists of the officers of the assembly and the presidents of the classes. This body devises and enforces the plans for the betterment and promotion of the social and scholastic welfare of the students of this division and also has charge of the weekly assemblies.

The present council has started a movement which will probably terminate in the adoption of a new "Alma Mater" by the Institute Student Council.

PERSONNEL

W. H. Oakley	*President of Assembly*
H. C. Hammann	*Vice-President of Assembly*
H. W. Lynn	*Secretary of Assembly*
W. G. Pennypacker	*Treasurer of Assembly*
G. T. Heddaeus	*President of Senior Class*
H. C. Hammann	*President of Junior Class*
A. W. Kann	*President of Sophomore Class*
S. P. Smith	*President of Freshman Class*
H. C. Hammann	*Representative to A. B. C.*
W. H. Oakley	*Representative to S. A. B.*

The C.I.T. Alumnus
Barney G

Alumni Federation

OFFICERS

W. W. Powell, '13	*President*
W. H. Ritts, '12	*First Vice-President*
V. A. Rigaumont, '12	*Second Vice-President*
Marion Burns, '11	*Third Vice-President*
Alan Bright, '11	*Fourth Vice-President*
Rachel Beatty, '18	*Secretary*
Helen Anderson Rush, '10	*Treasurer*

BOARD OF GOVERNORS

Division of the Arts

Mrs. J. I. Johnston, '14 — Victor Rigaumont, '12
M. M. Steen, '08

Division of Industries

W. C. Piper, '11 — W. H. Ritts, '12
L. Haas, '11

Division of Science and Engineering

Alan Bright, '11 — G. L. Tilbrook, '15
W. W. Powell, '13

Margaret Morrison Dirision

Marion Burns, '11 — Helen Anderson Rush, '10
Rachel Beatty, '18

Alumni Association

Division of the Arts

OFFICERS

M. M. Steen, '08	*President*
Virginia Schultz, '17	*Vice-President*
Mrs. J. I. Johnston, '14	*Secretary-Treasurer*

BOARD OF GOVERNORS

Bertha Bates Evans, '17	C. M. Hoffman, '12
Beatrice Heinrich Vernon, '18	W. M. McKee, '16
Sue Watson, '12	

Division of Industries

OFFICERS

B. A. Lutton, '12	*President*
G. Naismith, '14	*Vice-President*
L. Haas, '11	*Secretary*
J. W. Nunge, '12	*Treasurer*

BOARD OF GOVERNORS

W. E. Black, '16	H. L. Dawson, '12	W. S. Rabenstein, '09
W. P. Braun, '16	M. L. Haas, '09	G. R. Wagner, '13
E. L. Gague, '17	W. C. Piper, '11	W. H. Wunderlich, '18

Division of Science and Engineering

OFFICERS

Alan Bright, '11	*President*
E. G. Merrill, '16	*First Vice-President*
Harry Holiday, '12	*Second Vice-President*
G. L. Tilbrook, '15	*Secretary-Treasurer*

BOARD OF GOVERNORS

D. A. Casey, '09	H. P. Mason, '10
K. S. Henning, '16	R. E. Noble, '10
J. E. Kesner, '17	D. K. Reid, '10

Margaret Morrison Division

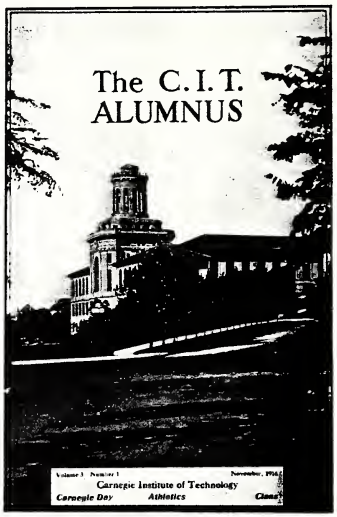
OFFICERS

Fannie Woodside, '09	*President*
Sue Smith, '17	*First Vice-President*
Florence Bechtel, '18	*Second Vice-President*
Edna C. Smith, '09	*Secretary-Treasurer*

EXECUTIVE COMMITTEE

Gail Sellers, '17	Genevieve Cushwa, '12
Rachel Beatty, '18	Mary Craighead, '11
Elinor Mellon, '19	Helen Stewart, '11

(The officers are members of this committee)



Directory of Tech Clans

AKRON—*President*—C. H. SCHULTZ, 312 S. 3rd St., Cuyahoga, Ohio
Secretary—A. C. SPRAGUE, 185 Perkins St., Akron, Ohio

BUFFALO—*Secretary*—D. A. CURTIS, 176 Maple St., Buffalo, N. Y.

CHICAGO—*Secretary*—J. J. KENNEDY, 3748 Wrightwood Ave., Chicago, Ill.

CLEVELAND—*Secretary*—MERTEN G. KINGSLEY, 17817 Cannon Ave., Cleveland, Ohio

DETROIT—*Secretary*—L. L. BEEKEN, care of Crescent Pump Co., Detroit, Mich.

ERIE—*Secretary*—E. F. OBERT, care of Ball Engine Co., Erie, Pa.

HARRISBURG—*President*—F. J. HARTMAN, Keystone Bldg., Harrisburg, Pa.
Secretary—MISS KATHRYN HAAG, 223 Maclay St., Harrisburg, Pa.

JOHNSTOWN—*Secretary*—RAY LIGHT, 146 Third Ave., Westmont, Johnstown, Pa.

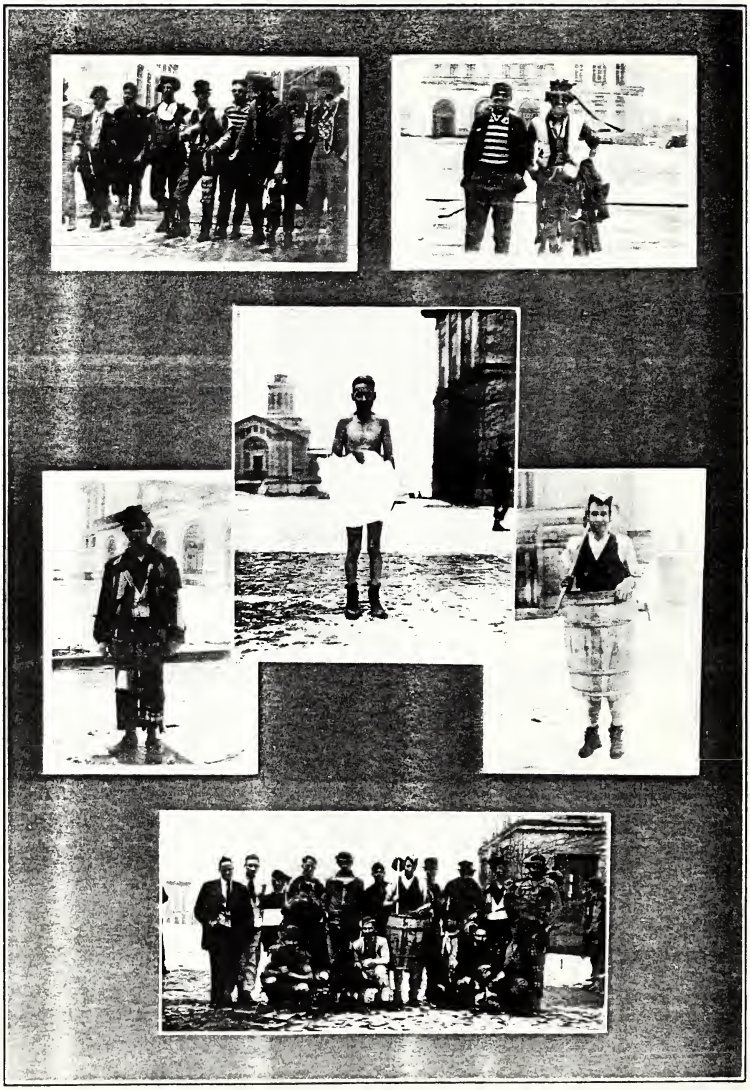
NEW YORK—J. GUTER, care of Consolidated Products Co., 15 Park Row, New York City

PITTSBURGH—*President*—D. W. WAITE, R. D. No. 1, Allison Park, Pa.
Secretary—W. H. NORMAN, Carnegie Institute of Technology, Pittsburgh, Pa.

PHILADELPHIA—*President*—LYNN E. EXLINE, care of Fidelity & Deposit Co. of Md., 505 Real Estate Trust Bldg., Philadelphia, Pa.
Secretary—ALBERT E. BALL, 626 Wynnewood Road, Philadelphia, Pa.

YOUNGSTOWN—*President*—J. C. SIEGLE, 1354 Elm St., Youngstown, Ohio
Secretary—G. W. TODD, 249 Redonda Road, Youngstown, Ohio

THE DIRTY SPOON
213
WINSTON 1920
IF YOU DONT LIKE THE SERVICE GET OUT!



ORGANIZATIONS

Honor Societies

TAU BETA PI
ALPHA TAU
TAU SIGMA DELTA
THE DRAGON
DELTA SKULL
LAWTOCHFRARIE
ALPHA ALPHA NU

HONOR SOCIETIES

1920

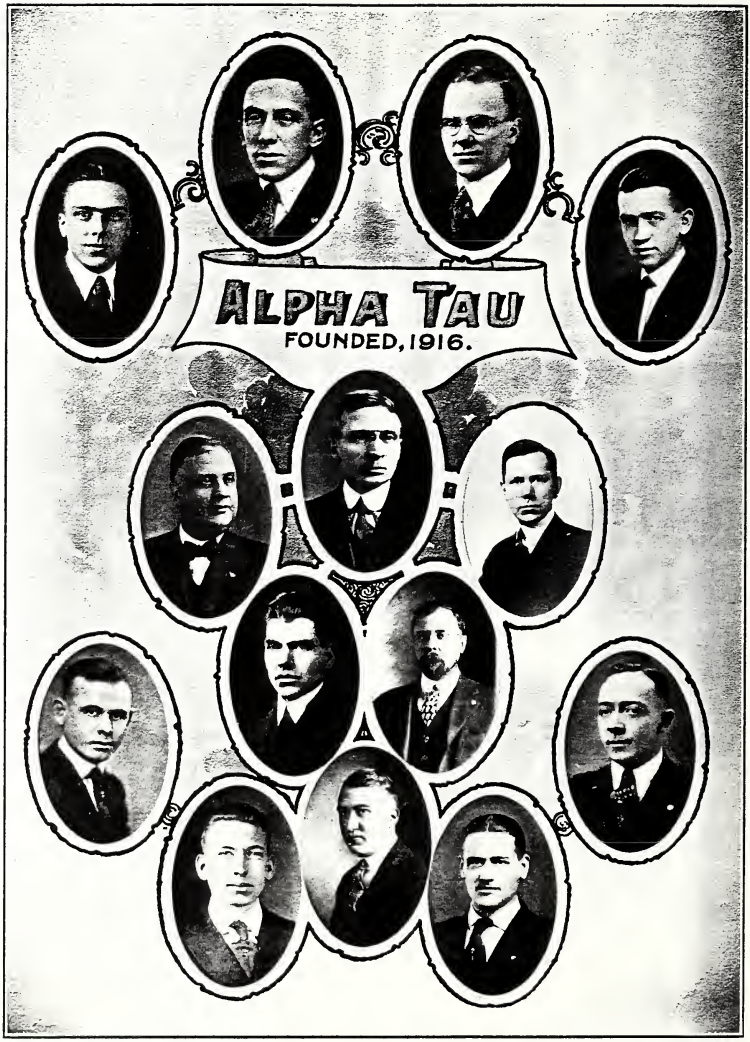
Tau Beta Pi Fraternity

Faculty Members

Arthur Arton Hamerschlag	Honorary Pennsylvania Gamma
William Elton Mott	Honorary Pennsylvaina Gamma
Willibald C. L. Trinks	Honorary Pennsylvania Gamma
Fred Crabtree	Honorary Pennsylvania Gamma
Joseph Hidy James	Honorary Pennsylvania Gamma
Allen Holt Blaisdell	Maine Alpha
Franklin Allen Simmons	Massachusetts Alpha
Francis Michael McCullough	Honorary Pennsylvania Gamma
Harry Sloan Hower	Honorary Ohio Alpha

Undergraduate Members

Edward F. Hirsch	Kenneth Kingsley Knaell
Edward Guthrie Stoy	Arthur John Kerr
Conrad August Stone	Frank Irwin Lawson
Harry Douthett Krummell	Russell Kenneth Lee
Laurence H. Hale	Gilbert Church Clark
Philip Carl Vetter	John Walter Towns
Terrence Wendell Allsworth	Wilbur Carl Seabright
E. Howard Pafenbach	Charles Joseph Code
Clarence Robert Dobson	George Constantin Balaurie


ALPHA TAU
FOUNDED, 1916.

Alpha Tau Honorary Fraternity

Honorary Members

Clifford B. Connelley — John T. Morris

Fred J. Hartman

Faculty Members

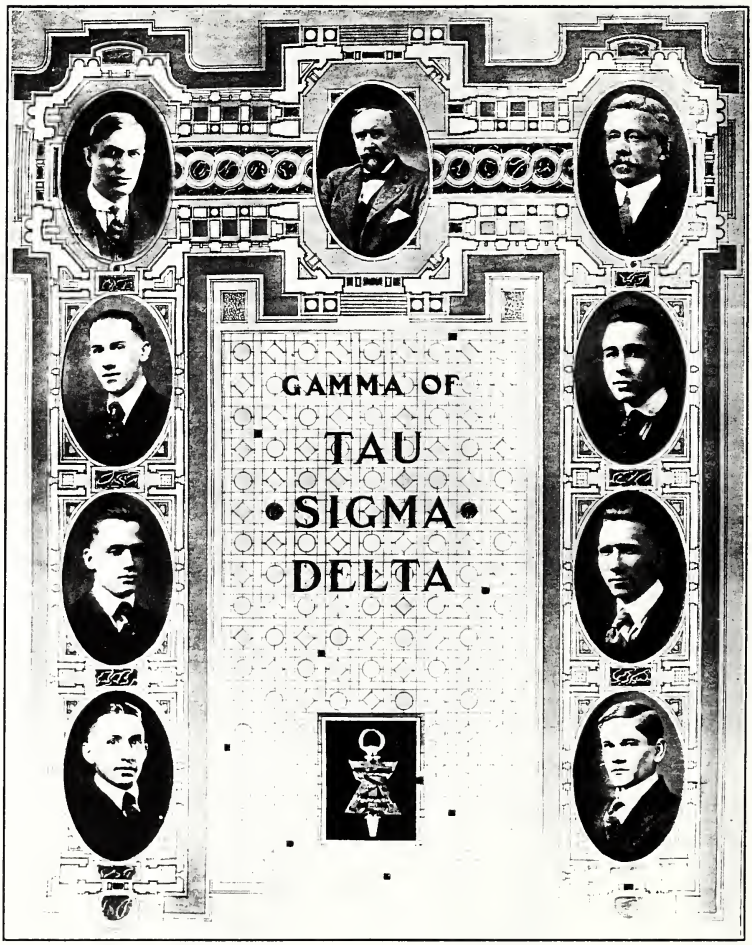
Professor C. G. Dunnells — Professor R. B. Leighou

Professor C. C. Leeds — Professor R. J. Peters

Mr. Harry L. Gage

Student Members

Myron F. Barrett
James W. Batman
Gilbert T. Heddaeus
Lawrence Dotterway
Paul Marceau
Harry Moore
Harry C. Hammann
Raymond F. Warner
James J. Rudisill
R. T. Whitney
Richard W. Arnold
Raymond T. Junkins


GAMMA OF
TAU
SIGMA
DELTA

Tau Sigma Delta

Honorary Fraternity in Architecture and Allied Arts

Founded at University of Michigan, 1913

Honorary Members

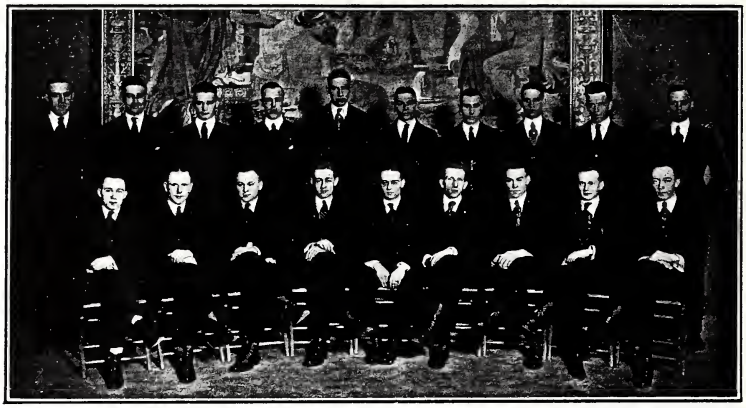
Director E. R. Bossange
Professor H. Sternfeld
Professor H. S. Dornberger
Mr. Henry Hornbostel

Active Members

Philip Friedman
Luther S. Lashmit
Robert Bowers
C. E. Silling
Harry F. Bremmer
K. B. Snow, *Affiliate Member*

ROLL OF CHAPTERS

Alpha	University of Michigan
Beta	University of Minnesota
Chi	University of Illinois
Delta	Syracuse University
Epsilon	University of Pennsylvania
Gamma	Carnegie Institute of Technology



The Dragon

L. Dale Aul
J. D. Beatty
N. J. Campbell
G. C. Clark
M. A. Fair
E. F. Hirsch
P. P. Marshall
E. H. Pafenbach
G. C. Stone
J. F. Sweeny
J. W. Batman
H. F. Bremmer
H. F. Carey
J. P. Davis
M. E. Green
C. K. Little
J. L. Miller
S. P. Stewart
E. G. Stoy
M. F. Yelle

Delta Skull

HONORARY SOCIETY OF THE JUNIOR CLASSES OF THE DIVISIONS OF SCIENCE AND THE ARTS

Junior Members

F. G. BLOOM
B. H. DIERKS
M. S. GARE
A. F. LEETE
C. T. MCCLEAN
L. D. PITTS
C. B. SCHMIDT
J. G. TODD
G. R. BRANDIN
R. D. FOXON
A. J. HANKS
C. A. MAURER
H. G. NICHOL
N. P. RICE
S. H. STUPAKOFF

Senior Members

L. D. AUL
M. A. FAIR
M. E. GREEN
C. K. LITTLE
E. H. PAFENBACH
G. C. STONE
J. F. SWEENY, JR.
M. F. YELLE
J. D. BEATTY
J. F. GIFFEN, JR.
E. F. HIRSCH
J. L. MILLER
R. M. RUSSELL
E. G. STOY
R. W. WELTER

Lawtochfrarie

SOPHOMORE HONORARY SOCIETY

Lawtochfrarie, the Sophomore Honorary Society of the Science School, was formed by a group of Sophomores in the spring of 1915. The purpose of the society is to promote new ideals that would be of benefit to the Institution, and also to give recognition to those most prominent in student activities during their Plebe year.

The membership is limited to ten men, they being elected the latter part of their Plebe year, and remaining active throughout their Sophomore year. They are chosen from the men who achieved prominence in athletics, school activities, and scholarship.

Active Members

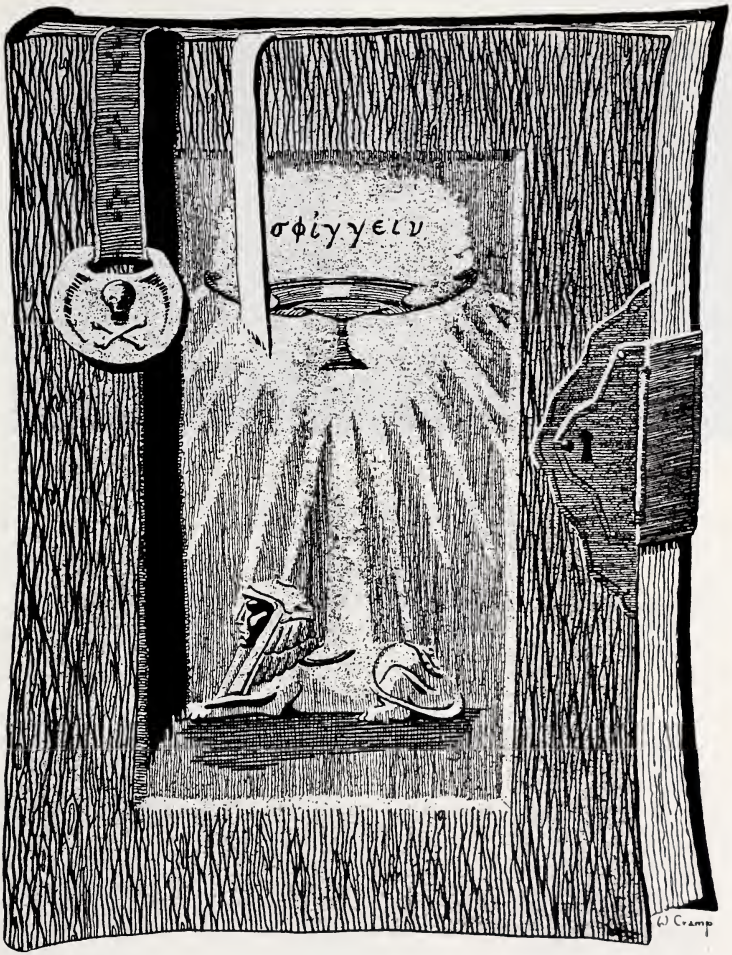
CHARLES A. BLESCH
GEO. W. CURTIS
JOHN G. KEELAN
HAROLD D. SKYRM
HARRY H. WADE
C. J. COPLEY
ROY J. DOUGHERTY
G. DONALD MARTIN
PAUL J. UNSICHER
E. J. WEISS

Alpha Alpha Nu

Charter Members

GILBERT C. CLARK
LEROY E. EMERICH
WILLIAM H. OAKLEY
WILLIAM M. BURKE
RICHARD E. TOWNSEND
WILBUR C. SEABRIGHT
HENRY F. SCHEETZ, JR.
FRED I. SMITH

Alpha Alpha Nu was organized in November, 1919. Its purpose is to honor men who have done notable work on the THISTLE, Tartan, or Puppet, and who have identified themselves with other activities.



National Fraternities

National Fraternities

THETA XI
SIGMA NU
DELTA UPSILON
SIGMA ALPHA EPSILON
PHI EPSILON PI
ALPHA KAPPA PSI

Interfraternity Council

OFFICERS

Marcus A. Fair	*President*
Clarence B. Schmidt	*Vice-President*
Gilbert C. Clark	*Secretary-Treasurer*

Fraternity Representatives

Theta Xi	James L. Miller Edward G. Stoy
Sigma Nu	Marcus A. Fair John F. Sweeny, Jr.
Sigma Alpha Epsilon	James F. Giffen, Jr. Louis T. Barry
Sigma Rho	Martin W. Pohlmeyer Charles J. Copley
Xi Sigma Upsilon	Daniel H. Bodin Gilbert C. Clark
Woodlawn Club	Clarence B. Schmidt Russell M. Russell
Tau Gamma Phi	Livingston Disbrow John O. Cahill

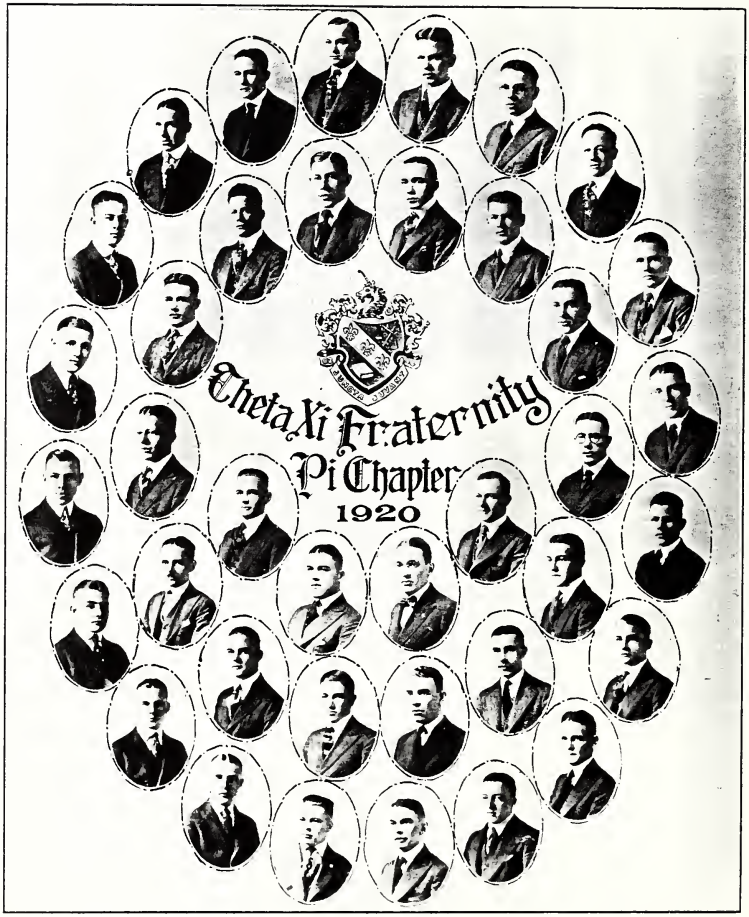
Pi
of
Theta Xi

Theta Xi

PI CHAPTER

ROLL OF CHAPTERS

ALPHA	Rensselaer Polytechnic Institute
BETA	Sheffield Scientific School, Yale University
GAMMA	Stevens Institute of Technology
DELTA	Massachusetts Institute of Technology
EPSILON	Columbia University
ZETA	Cornell University
ETA	Lehigh University
THETA	Purdue University
IOTA	Washington University
KAPPA	Rose Polytechnic Institute
LAMBDA	Pennsylvania State College
MU	Iowa State College
NU	University of California
XI	State University of Iowa
OMICRON	University of Pennsylvania
PI	Carnegie Institute of Technology
RHO	University of Texas
SIGMA	University of Michigan
TAU	Leland Stanford Junior University
UPSILON	University of Washington
PHI	University of Wisconsin


Theta Xi Fraternity
Pi Chapter
1920

Pi Chapter of Theta Xi

Fratres in Facultate

Director William Elton Mott
Prof. Alexander J. Wurts
Prof. Harry Sloan Hower
Howard Albert Vierheller

Fratres in Collegio

John David Beatty, '20
Doanld Bennix Gawthrop, '20
Adrian Bloom Krebs, '20
David Blair Shilliday, '20
Edward Guthrie Stoy, '20
Worley Perrine Albaugh, '21
Henry Earl Bromer, '21
Paul Hamilton Dickey, '21
Roy Draper Foxon, '21
Alfred William Grieb, '21
Edward John Isherwood, '21
Louis David Pitts, '21
John Gray Shilladay, '21
William Howard Sturgeon, '21
Roy Welter, '21
D'arl George Bash, '22
Albert Roger Chase, '22
John Gerard Kedlan, '22
Herman Cramer Riblett, '22
Paul Josephus Unzicker, '22
Harold Knight Weiss, '22
Kersey Ringgold Dever, '23
Charles Nevin Harwood, '23
Homer Frank Carey, '20
Edward Fred Hirsch, '20
James Ledlie Miller, '20
Julian Price Staples, '20
Matthew Ferdinand Yelle, '20
Frederick Sturate Bloom, '21
George Edward Darden, '21
Thomas Moore Felton, '21
Paul Deal Good, '21
Henry Charles Henderson, '21
Fred Alexander Nicholson, '21
Ernest Justin Rehm, '21
Semon Henry Stupakoff, '21
Benjamin Shields Urmston, '21
Paul Joseph Baldwin, '22
Robert Haxton Carew, '22
Alfred Dale Jenner, '22
George McElwain, '22
Ray Collins Siggens, '22
Harry Thomas Ward, '22
George Tarry Bryson, '23
Chester Alexander Emery, '23
Sidney Keeler, '23

Pledges

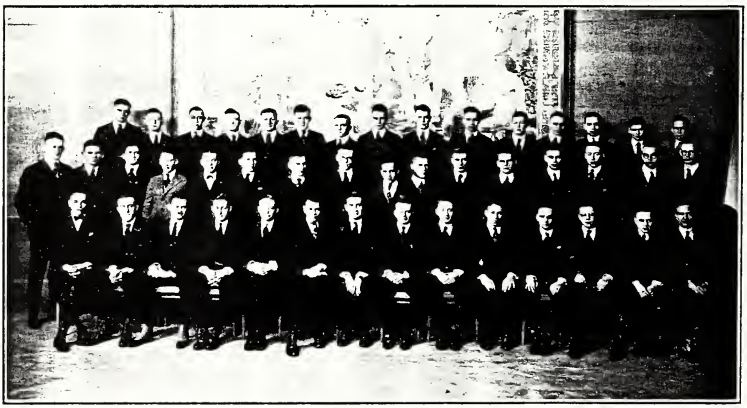
G. F. Craighead, '23
Henry W. Dosey, '23
G. Bennett Findley, '23
Henry French Simpson, '23
Richard Smyth Diehl, '23
George Henry Dyke, '23
Smith Frye, '23

Sigma Nu

Sigma Nu

ACTIVE CHAPTER ROLL

Beta	University of Virginia
Epsilon	Bethany College
Eta	Mercer University
Theta	University of Alabama
Iota	Howerd College
Kappa	No. Georgia Agriculture College
Lambda	Washington and Lee University
Mu	University of Georgia
Nu	University of Kansas
Xi	Emory College
Pi	Lehigh University
Rho	University of Missouri
Sigma	Vanderbilt University
Upsilon	University of Texas
Phi	Louisiana State University
Psi	University of North Carolina
Beta Beta	De Pauw University
Beta Zeta	Purdue University
Beta Eta	Indiana University
Beta Theta	Alabama Polytechnic Institute
Beta Iota	Mount Union College
Beta Kappa	Southwest Kansas College
Beta Mu	University of Iowa
Beta Nu	Ohio State University
Beta Xi	William Jewell College
Beta Rho	University of Pennsylvania
Beta Sigma	University of Vermont
Beta Tau	No. Carolina Ag. and Mech. Arts
Beta Upsilon	Rose Polytechnic Institute
Beta Phi	Tulane University
Beta Chi	Leland Stanford Junior University
Beta Psi	University of California
Gamma Alpha	Georgia School of Technology
Gamma Beta	Northwestern University
Gamma Gamma	Albion College
Gamma Delta	Stevens School of Technology
Gamma Epsilon	Lafayette College
Gamma Zeta	University of Oregon
Gamma Eta	Colorado School of Mines
Epsilon Beta	Drury College
Gamma Theta	Cornell University
Gamma Iota	University of Kentucky
Gamma Kappa	University of Colorado
Gamma Lambda	University of Wisconsin
Gamma Mu	University of Illinois
Gamma Nu	University of Michigan
Gamma Xi	Missouri School of Mines
Gamma Omicron	University of Washington
Gamma Pi	University of West Virginia
Gamma Rho	University of Chicago
Gamma Sigma	Iowa State College
Gamma Tau	University of Minnesota
Gamma Upsilon	University of Arkansas
Gamma Phi	University of Montana
Gamma Chi	University of Washington
Gamma Psi	Syracuse University
Delta Alpha	Case School of Applied Science
Delta Beta	Dartmouth College
Delta Gamma	Columbia University
Delta Delta	Pennsylvania State College
Delta Epsilon	University of Oklahoma
Delta Zeta	Western Reserve University
Delta Eta	University of Nebraska
Delta Theta	Lombard College
Delta Iota	State College of Washington
Delta Kappa	Delaware College
Delta Lambda	Brown University
Delta Mu	Stetson University
Delta Nu	University of Maine
Delta Xi	University of Nevada
Delta Omicron	University of Idaho
Delta Pi	George Washington University
Delta Rho	Colorado Agricultural College
Delta Sigma	Carnegie Institute of Technology
Delta Tau	Oregon Agricultural College
Delta Upsilon	Colgate University
Delta Phi	Maryland State College
Delta Chi	Trinity College
Delta Psi	Bowdoin College
Epsilon Alpha	Arizona University



SIGMA NU

Sigma Nu

Chapter Roll

W. S. Andrews
L. D. Aul
C. A. Blesch
H. A. Bowman
G. A. Brink
H. C. Brockman
N. J. Campbell
N. E. Carr
R. M. Crosby
G. W. Curtis
R. E. Dake
W. E. Daugherty
C. H. Dyer
M. A. Fair
F. H. Floyd
J. W. Fritz
J. H. Gordon
R. H. Gwinner
G. H. Haynes
H. R. Hiller
F. S. Holmes
W. R. Howell
A. F. Leet
P. P. Marshall
C. A. L. Maurer
M. H. Mawhinney
G. E. Monroe
C. T. McClean
E. B. McElroy
R. A. McKee
J. F. Nation
R. B. Nation
I. F. Nutting
V. C. Olsen
E. B. Patterson
F. H. Rinehart
R. W. Schmertz
P. F. Simpson
H. D. Skyrm
S. P. Stewart
W. D. Stewart
G. C. Stone
J. F. Sweeny, Jr.
G. E. Tucker
H. H. Wade
W. A. Warrick
C. G. F. Zobel

Delta Upsilon

Delta Upsilon

FOUNDED IN 1834 AT WILLIAMS COLLEGE

ROLL OF CHAPTERS

WILLIAMS	Williams College	WISCONSIN	Wisconsin University
UNION	Union University	LAFAYETTE	Lafayette College
HAMILTON	Hamilton College	COLUMBIA	Columbia University
AMHERST	Amherst College	LEHIGH	Lehigh University
WESTERN RESERVE	Western Reserve University	TUFTS	Tufts College
WESLEYAN	Wesleyan University	DEPAUW	DePauw University
COLBY	Colby College	PENNSYLVANIA	University of Pennsylvania
ROCHESTER	University of Rochester	MINNESOTA	University of Minnesota
MIDDLEBURY	Middlebury College	TECHNOLOGY	Massachusetts Inst. of Tech'gy
BOWDOIN	Bowdoin College	SWARTHMORE	Swarthmore College
RUTGERS	Rutgers College	STANFORD	Leland Stanford Junior Univ.
WASHINGTON AND JEFFERSON	Wash. and Jefferson College	CALIFORNIA	University of California
		MCGILL	McGill University
COLGATE	Colgate University	NEBRASKA	University of Nebraska
NEW YORK	New York University	TORONTO	University of Toronto
MIAMI	Miami University	CHICAGO	University of Chicago
BROWN	Brown University	OHIO STATE	Ohio State University
CORNELL	Cornell University	ILLINOIS	University of Illinois
TRINITY	Trinity College	WASHINGTON	University of Washington
MARIETTA	Marietta College	PENNSYLVANIA STATE	Pennsylvania State College
SYRACUSE	Syracuse University	IOWA STATE	Iowa State Col. of Agriculture
MANHATTAN	College of City of New York	PURDUE	Purdue University
MICHIGAN	University of Michigan	INDIANA	Indiana University
NORTHWESTERN	Northwestern University	CARNEGIE	Carnegie Institute of Tech'gy
HARVARD	Harvard University	KANSAS	University of Kansas

Delta Upsilon

Fratres in Facultate

H. T. R. Aude
Daniel C. Long
Robert A. Rundle
Clifford G. Dunnells
Charles Gott
Edgar M. Starr

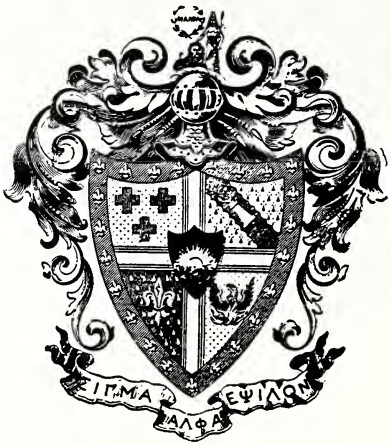
Delta Upsilon

ACTIVE MEMBERS

Frank I. Lawson, '20
Gilbert T. Heddaeus, '20
Nelson P. Rice, '20
Lauren E. Hawkins, '21
Joseph S. Hubbard, '21
William D. Loulan, '21
Jerome B. McMahon, '21
Horace G. Nichol, '21
Robert W. Schlumpf, '21
William M. Burke, '22
Ray J. Doherty, '22
Bernard H. Lawson, '22
Arthur A. Neff, '22
Victor H. Stromquist, '22
Alexis H. Tosteson, '22
William C. Burchard, '23
Albert F. Eichhorn, '23
Jack L. Jacobson, '23
William F. Keough, '23
George Weidline, '23
John A. Willard, '23
C. Kenneth Little, '20
Nichlas Hans Muller, '21
Alexander J. Dreux, '21
John L. Herrmann, '21
Paul L. Irwin, '21
J. Kenneth W. Macalpine, '21
Frank H. Mercer, '21
Carl B. Reid, '21
Laurin D. Woodworth, '21
John G. Byler, '22
Everett Hughes, '22
William W. Macalpine, '22
Fred I. Smith, '22
Elwin M. Stults, '22
John Vos, '22
Allan Calvert, '23
Ross Hertz, '23
Paul R. Kennedy, '23
John M. Smith, '23
Edward L. Weinman, '23
Mark L. Wright, '23

PLEDGES

Kenneth H. Davis, '22
John D. Evans, '23
Denton J. Moon, '23
Roger Marshall, '23
Howard G. Whitmer, '23



Sigma Alpha Epsilon

Roll of Chapters

ME. Alpha—University of Maine
MASS. Beta Upsilon—Boston University
MASS. Gamma—Harvard University
MASS. Delta—Worcester Polytechnic Institute
MASS. Iota Tau—Mass. Institute of Technology
N. H. Alpha—Dartmouth College
N. H. Beta—New Hampshire College
N. Y. Alpha—Cornell University
N. Y. Delta—Syracuse University
N. Y. Mu—Columbia University
N. Y. Rho—St. Lawrence University
N. Y. Sigma Phi—St. Stephens College
PA. Alpha Zeta—Pennsylvania State College
PA. Gamma—Lafayette College
PA. Delta—Pennsylvania College
PA. Zeta—Bucknell University
PA. Theta—University of Pennsylvania
PA. Sigma Phi—Dickinson College
PA. Chi Omicron—University of Pittsburgh
PA. Omega—Allegheny College
PA. Phi—Carnegie Institute of Technology
N.C. Theta—Davidson College]
N. C. Xi—University of North Carolina
VA. Omicron—University of Virginia
VA. Sigma—Washington and Lee University
WASH. CITY Rho—George Washington University
ILL. Beta—University of Illinois
ILL. Delta—Millikin University
ILL. Theta—University of Chicago
ILL. Psi Omega—Northwestern University
IND. Alpha—Franklin College
IND. Beta—Purdue University
IND. Gamma—Indiana University
MICH. Alpha—Adrian College
MICH. Iota Beta—University of Michigan
MINN. Alpha—University of Minnesota
OHIO Delta—Ohio Wesleyan University
OHIO Epsilon—University of Cincinnati
OHIO Theta—Ohio State University
OHIO Rho—Case School of Applied Science
OHIO Sigma—Mt. Union College
OHIO Mu—Denison University
OHIO Tau—Miami University
WIS. Alpha—University of Wisconsin
WIS. Phi—Beloit College

ALA. Alpha Mu—Alabama Institute of Technology
ALA. Iota—Birmingham-Southern College
ALA. Mu—University of Alabama
FLA. Upsilon—University of Florida
GA. Beta—University of Georgia
GA. Epsilon—Emory University
GA. Phi—Georgia School of Technology
GA. Psi—Mercer University
ARK. Alpha Upsilon—University of Arkansas
IOWA Beta—University of Iowa
IOWA Gamma—Iowa State College
KAN. Alpha—Kansas State University
KAN. Beta—Kansas State College
MO. Alpha—University of Missouri
MO. Beta—Washington University
NEB. Lambda Pi—University of Nebraska
S. D. Sigma—University of South Dakota
COLO. Delta—Colorado Agricultural College
COLO. Zeta—University of Denver
COLO. Lambda—Colorado School of Mines
COLO. Chi—University of Colorado
WYO. Alpha—University of Wyoming
LA. Epsilon—Louisiana State University
LA. Tau Upsilon—Tulane University
OKLA. Kappa—University of Oklahoma
TEX. Rho—University of Texas
KY. Epsilon—University of Kentucky
KY. Iota—Bethel College
KY. Kappa—Central University
TENN. Zeta—Southern Presbyterian University
TENN. Eta—Union University
TENN. Kappa—University of Tennessee
TENN. Lambda—Cumberland University
TENN. Nu—Vanderbilt University
TENN. Omega—University of the South
ARIZ. Alpha—University of Arizona
CAL. Alpha—Leland Stanford, Jr. University
CAL. Beta—University of California
NEV. Alpha—University of Nevada
IDAHO Alpha—University of Idaho
MONT. Alpha—Montana State College
ORE. Alpha—Oregon State Agricultural College
ORE. Beta—University of Oregon
WASH. Alpha—University of Washington
WASH. Beta—Washington State College

Sigma Alpha Epsilon

PENNSYLVANIA PHI CHAPTER

Terrance W. Allsworth
Harold G. Atchley
Franklin H. Allison
James L. Anderson
George C. Balaurie
Louis T. Barry
Walter J. Blenko
William J. Brennen
Earle A. Butts
Charles A. Carney
Arthur J. Christopher
Paul W. Craig
Jack E. Cunningham
Wilbur B. Cunningham
Benjamin F. Davis
Clarence H. Davis
Robert Donovan
Arthur L. Elliott
William K. Fawcett
John W. Ford
Clifford M. Foust
Clarence H. Gens
James F. Giffen, Jr.
Carl H. Grimm
Carl G. Hauser
Walter J. Hawkins
George A. Henderson
Walter J. Heiler
Frederick J. Heinle
Robert D. Horn
Lowey Hott
Albert J. Hynd
George L. Jordy
James D. Keighbey
John D. Kennedy
Arthur J. Kerr
Kenneth K. Knaell
Raymond L. Kreidler
Merton L. Langworthy
Clarence J. Livingston
Robert F. Lunger
Harold E. Mateer
Irmin T. Meyer
William R. Mills
Charles A. McDade
Wayne S. McKee
Julius H. Penske, Jr.
William J. Ravenscroft
Robert S. Richards
David C. Saylor
Albert A. Schoepf
Carl J. Schumacher
Arlo L. Shook
Donald Sillers
Ronald L. Stevenson
H. Donald Sonnemann
Andrew C. Temmel
Thomas G. Tiffany
Philip C. A. Vetter
Louis E. Welch
William L. Wilson
Robert M. Wellman

Phi
of
Phi Epsilon Pi

Phi Epsilon Pi

Roll of Chapters

Alpha	College of the City of New York
Beta	Columbia University
Epsilon	Cornell University
Eta	University of Pennsylvania
Theta	Pennsylvania State College
Zeta	University of Pittsburgh
Iota	Dickinson College
Kappa	New York University, School of Law
Lambda	Rutgers University
Mu	University of Georgia
Nu	University of Virginia
Xi	Georgia School of Technology
Omicron	Tufts College
Pi	University of Maine
Rho	Rhode Island State College
Sigma	Brown University
Tau	Alabama Polytechnic Institute
Upsilon	Connecticut Agricultural College
Phi	Carnegie Institute of Technology
Chi	Syracuse University

PHI EPSILON PI

Phi Epsilon Pi

Fratres in Collegio

David H. Abrams
Benjamin Bendett
Harry Bress
Martin I. Cohen
Philip Freedman
Harry Ginsburg
Herman Goldberg
Jesse Harris
William Isler
Meyer Kitaif
Harry Levy
Louis H. Siegler
Isadore Sharove
Michael Aron
Samuel Breskin
A. Brunwasser
Max C. Drebin
Louis Eisenstat
Morris D. Gladstein
Israel Goldman
Joseph Isaacs
Morris L. Jacob
Abram Levy
Samuel Rosenblatt
Manuel Selker
Charles Stark

Samuel Weis

Pledges

Abram Felstein
Philip Forman
Lester Krieger
David E. Leven
Henry Mandelstamm
Isaac Sissman
Samuel Sterman
Benjamin Weinblatt

Abram Weller

Kappa
of
Alpha Kappa Psi

Kappa Chapter of the Alpha Kappa Psi

Active Members

Winifred Cramp
Sara Floyd
Mildred Knox
Josefa Lang
Caroline Mering
Elizabeth Milligan
Mary Frances Murdock
Elizabeth Regester
Virginia Stiffel
Eleanor Walker
Catherine Walsh
Janet Wright

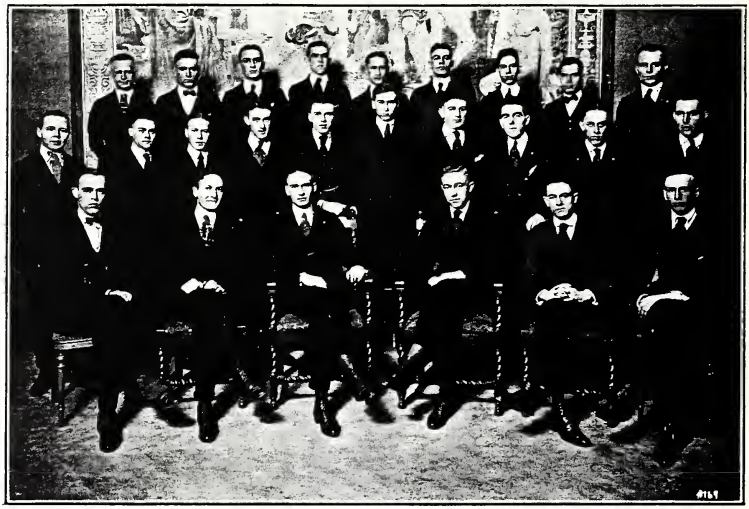
Pledges

Leonore Donahoe
Genevieve Donavan
Margaret Purcell

Local Fraternities

SIGMA RHO
XI SIGMA UPSILON
WOODLAWN CLUB
TAU GAMMA PHI
OPHELEUM
DELTA EPSILON OMEGA
KAPPA SIGMA RHO
ALPHA PI
SQUARE AND COMPASS CLUB

LOCAL FRATERNITIES



Sigma Rho

Sigma Rhó

Faculty Members

PROF. FREDERICK CRABTREE — ALAN BRIGHT

Members

HARRY T. ASPINWALL
CHARLES W. CODE
CHARLES J. COPLEY
BARRY H. DIERKS
FRANCIS K. DRAZ
DONALD W. DU VALL
GORDON W. FIRST
M. EDWIN GREEN
FRANCIS J. HURST
C. NESS IRVINE
IRVINE N. KING
CLIFFORD A. LAKE
RUSSELL K. LEE
ADDISON A. MANKEL
EVAN MASSEY
J. DONALD MAWHINNEY
ALBERT C. MAY
E. HOWARD PAFENBACH
MARTIN W. POHLMEYER
WALTER C. SMITH
HERMAN F. SOBECK
WILLIAM J. THOMAS
JOHN G. TODD
C. HUNTLEY WALLACE
RAYMOND E. WILLIAMS
SYLVESTER V. WILLIAMS
ARLEIGH B. WILLIAMSON

Pledges

CHARLES F. BOWERS
WILLIAM C. CUMMINS
JOHN N. FRANKLIN
JAMES C. GREENE
JAMES HALL
THOMAS B. GOTHAM
ARTINO I. CASANOVA
RICHARD R. BEATTY
JAMES W. LEA
GEORGE S. MERTS
ALVIN D. NICHOLLS
EDWARD F. PENTERMAN
HAROLD W. SCHAUGHENCY
DONALD WILLIAMS
CLARENCE R. DOBSON

Xi Sigma Upsilon

Xi Sigma Upsilon

Members

John Phillips Davis
Daniel H. Bodin
Charles Edwin Heywood
John Shaffer McFeaters
James Franklin Kilburn
Daniel Francis Cassidy
Leo A. Sawders
Lewis George Seebach
Aubrey Warren Chesterman
William Arnold Fitzsimmons
Samuel Eugene Dyke
John Walter Towns
John Edgar Bowler
Gilbert Church Clark
Wilbur Carl Seabright
Lindsey Johnson Rockwell
John Lewis McCullough
Harry Wallace Smith
Fred William Kling
Clarence Cooper Richard
Hugh Sydenham Torbert
Willard Albert Holt
Arthur G. Kendrick
Edgar Holcomb

Woodlawn Club

Woodlawn Club

Faculty Adviser

PROF. BOYD C. DENNISON

Members

R. NEAL JONES, '20
CHARLES M. BLACKBURN, '21
S. RUDOLPH BRANDIN, '21
LE ROY E. EMERICK, '21
DAVID H. EVANS, '21
MARSHALL S. GARE, '21
ALFRED J. HANKS, '21
JOHN C. HARKNESS, '21
THOMAS R. HINCKLEY, '21
SAMUEL H. JAMISON, JR., '21
LAWRENCE K. PAQUIN, '21
LAWRENCE H. RANK, '21
R. MIRICK RUSSELL, '21
CLARENCE B. SCHMIDT, '21
HOMER M. SINCLAIR, '21
GEORGE W. SMITH, '21

JOHN T. AMES, '22
WILLIAM S. BENNETT, JR., '22
JOSEPH T. ESS, '22
ROBERT C. GOOCH, '22
PAUL T. HANNEN, '22
RAY E. KRUSE, '22
WILLIAM A. MCGILL, '22
G. DONALD MARTIN, '22
GEORGE F. REINHART, '22
GEORGE M. WINSLOW, '22
A. MORRIS COLLINS, '23
GEORGE R. GOODRICH, '23
CHARLES F. JORDAN, '23
CLARENCE F. MCCORMICK, '23
THOMAS MCDONALD, '23
DEWEY H. MILLER, '23

EDWARD R. PATTEN, '23

Pledges

RICHARD F. SCHMIDT, '22
JOHN L. SMITH, '23
THOMAS J. LOOMIS, '23
PAUL DUFFIE, '23
EDWARD HAYES, '23

1920
TAU GAMMA PHI

Tau Gamma Phi

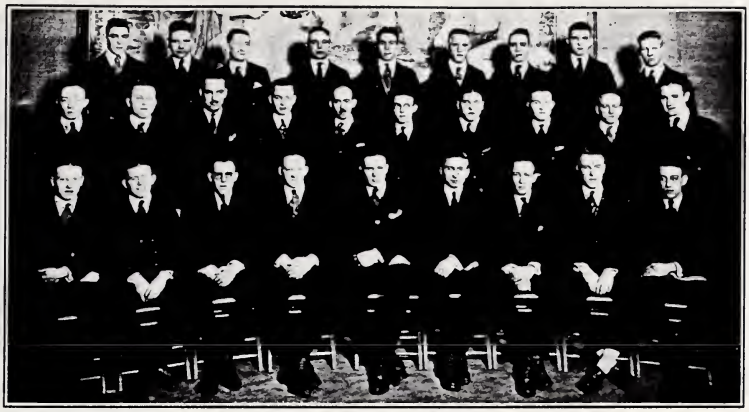
Active Members

Ray G. Bergstrom, '20
Livingston Disbrow, '20
Lawrence H. Hale, '20
Harold A. Wieland, '20
Benjamin F. Anthony, '21
Howard A. B. Bliss, '21
John O. Cahill, '21
Arthur J. Edstrom, '21
Arthur P. Herrman, '21
John M. Montstream, '21
Harold R. Titus, '21
Harry W. Anderson, '22
H. Hamlin Burdick, '22
Roswell B. Dunham, '22
Clarence W. Hunt, '22
Dwight H. Infield, '22
Edward R. Kime, '22
Norman W. Lind, '22
Harry E. Rudy, '22
James N. Roche, '22
Gerald O. Schoonover, '22
Elmer F. Weiss, '22

Pledges

Harry W. Stone, '21
Charles R. Burgis, '23
Irwin C. Imler, '23
Emil W. Klee, '23
Charles J. Kuhn, '23
Ward L. Olmsted, '23

Opheleum



Opheleum Fraternity

Fratres in Facultate

JOHN T. MORRIS

DR. WILLIAM MARKS

Fratres in Collegio

JAMES W. BATMAN, '20
HAROLD G. CULIN, '20
SAMUEL B. SHEARER, '20
WILLIAM H. OAKLEY, '20
FRANCIS J. SIMONS, '20
RALPH P. WOODWARD, '20
HERBERT S. YERGEY, '20
WILLIAM E. BIKLE, '21
RICHARD W. ARNOLD, '21
HOLMES W. LYNN, '21
PAUL D. AKINS, '21
FRANK C. WIRE, '21
AUGUST KANN, '21
WILLIAM G. PENNYPACKER, III, '21
GEORGE M. HAYES, '22
JOHN E. HESS, '22
JAMES E. KING, '22
G. MORTON MURPHY, '22
LINCOLN T. YOUNG, '22
LOUIS U. MANSFIELD, '22

Pledges

PAUL S. ALLEN, '23
STUART P. SMITH, '23
C. PARK RICHARDSON, '23
LOGAN T. JOHNSTON, '23
HARRY W. MCCAW, '23
BRUCE F. POWRIE, '23
FLOYD R. FISHER, '23
MYRON T. MOORE, '23

Delta Epsilon Omega

Delta Epsilon Omega

Honorary Member

JOHN T. HOYLE

Members

RAYMOND C. ALTERMATT
CLARENCE W. ANDERSON
HENRY F. BRAYER
HAROLD C. GODDEN
WILLIAM A. LUSBY
LEWIS C. MORRISON
JOHN W. PIOTROWSKI
JAMES J. RUDISILL
BAYARD S. SHUMATE
C. ANGUS SMITH
BERT K. WALKER
JOHN W. ZIMMER

Pledges

ROY GAFVERT
EDWARD GROSS
EARL HENNINGER
LAWRENCE A. MATTESON
VANCE H. WILSON
HARVEY A. YOUNG

WILLIAM G. HUG

Kappa Sigma Rho

Kappa Sigma Rho

FOUNDED 1914

FACULTY MEMBERS

GILBERT H. BARNES, A.B., M.A. EDWIN F. SMITH

MEMBERS

Class of 1920

L. E. LORA JOHN L. WOMACK ROY V. MAST

Class of 1921

ROBERT P. AVERY PAUL S. MCNAMARA RALPH D. FELTYBERGER
HARRY C. HAMMANN RAYMOND F. WARNER JAMES B. HILDERBRAND
HENRY E. ROBINSON

Class of 1922

FRANK E. BOLLINGER IRWIN VANNAN, JR. W. KENNETH WILLIAMS
HAROLD MCCLEAN DALE WINNER MARTIN N. RHORBACK
RALPH L. SHANO HAROLD C. WALKER

PLEDGES

ROBERT J. CARR THEODORE F. KARR WILLIS JOHNSON
GEORGE HITESHUE DOUGLAS DUNCAN GEORGE G. MILLER

Alpha Pi

Alpha Pi

Members

Julius C. Gershen
Edward A. Haupt
Myer L. Laufe
Samuel S. Levin
A. Levy
Arthur J. Lubin
Cecil Lurie
A. H. Parker
Samuel M. Rodzinsky
Morton Rosenthal
Jacob Sack
W. A. Walder

Harry Zimmerman

Square and Compass Club

Square and Compass Club

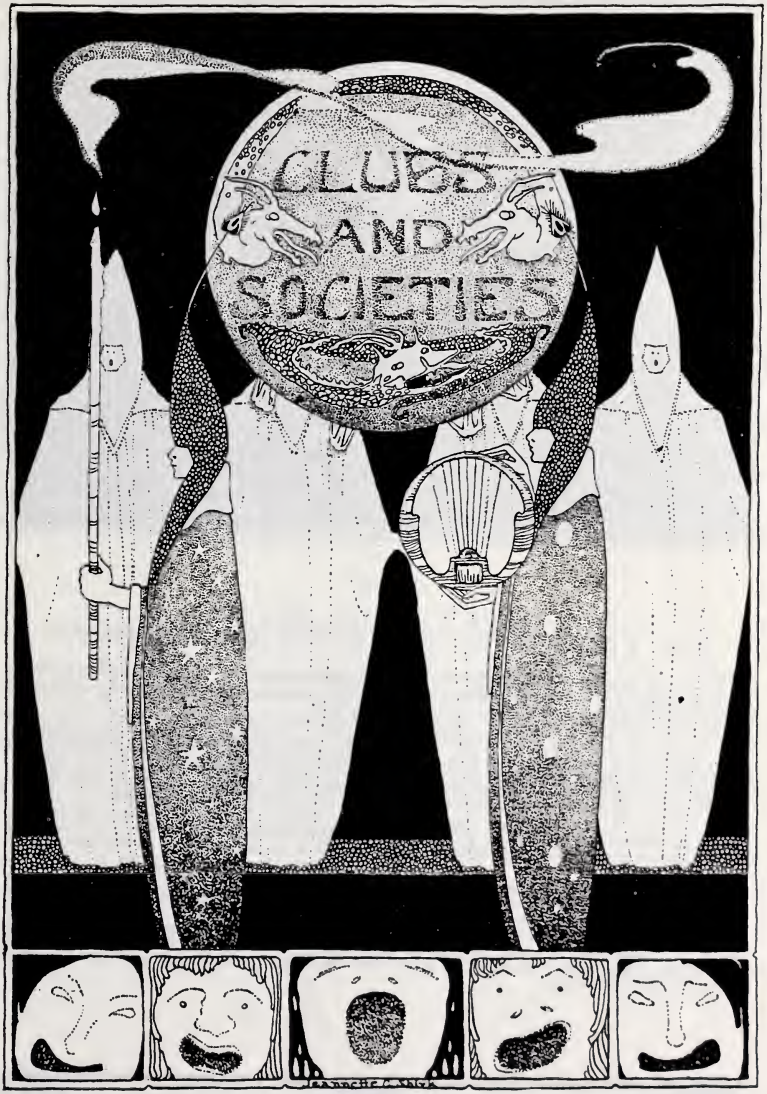
Fratres in Facultate

B. L. Keim

H. M. McCully

Fratres in Collegio

G. E. Adams
W. A. Anderson
S. E. Brillhart
J. S. Church
L. De Prefontain
D. S. Gaither
W. D. Hall
R. H. Topping
V. H. Lawrence
J. D. Miller
E. J. Nesper
K. W. Schucker
C. P. Scudder
R. W. Sleath
F. A. Starkweather


CLUBS
AND
SOCIETIES

The Young Women's Christian Association

The Young Women's Christian Association is the youngest organization in Margaret Morrison, a charter having been granted to it in February, 1918. Despite its youth it has gained power rapidly, so that the membership now includes about one third of the registration of the school.

Its growth and power is manifested in the fact that it has sent its full quota to every Y. W. C. A. Convention which has been held within the last two years, and to which it was entitled representation. Last summer, five girls were sent by the association to the conference at Eaglesmere, Pennsylvania. This conference was of great importance to our organization because of the contact our delegates had with all the great Y. W. C. A. leaders of the East Central Field as well as with girls from all the schools of Pennsylvania and Maryland. From this contact, the girls obtained many splendid plans and ideas for the work of the Y. W. C. A. this year.

In November, the Annual Members' Conference was held at Philadelphia. The annual member of this school was sent to represent not only Margaret Morrison but Pennsylvania College for Women, Thiel, and Westminster as well. Because of the growth of this association, it was decided at the convention that we should be granted a representative every year.

In January, the Student Volunteer Convention will be held at Des Moines. The Y. W. C. A. devised plans whereby our full quota of four students and one faculty member should be enabled to attend. The girls of the entire school, with very little outside contribution, raised sufficient money to send four of the delegates.

Aside from these conventions, our work directly within the school is becoming more clearly manifest and important. Meetings are held once a week: splendid speakers are obtained and delightful programs are rendered. Although the membership does not include the entire school, the Y. W. C. A. has the backing of the entire student body in its large undertakings.

M. M. C. C. Guild

With the world-wide peace, the spirit of giving has not ceased at M. M. D. Instead, the Guild, the charitable organization of M. M. D., has had more success this year than usual. The Guild has extended a helping hand to many needy institutions, among which are the Kingsley Settlement House and the Pittsburgh Home for Girls.

The fees from membership, proceeds from an annual dance, and from the Christmas Bazaar, are a few of the ways in which the Guild obtains money for charitable purposes.

OFFICERS

Mary Louise MacCaughey	*President*
Erma Friedman	*Vice-President*
Mabel Alexander	*Secretary and Treasurer*

American Association of Engineers

Carnegie Institute of Technology Chapter

OFFICERS

H. F. Stimm	*President*
W. C. Fox	*Secretary*
A. N. Stratmoen	*Treasurer*

EXECUTIVE BOARD

H. F. Stimm
J. W. Towns
J. K. W. Macalpine
L. H. Hale
W. C. Fox
W. C. Seabright
W. D. Stewart
L. A. Yoder

MEMBERS

L. R. Allison
Wm. A. Anderson
Wm. E. Baron
Earl C. Bolton
Edw. A. Brand
Harold K. Burr
J. B. Carvalho
W. R. Cuthbert
F. B. Dreifus
George N. Flocos
Clarence H. Gens
Harry Ginsburg
L. H. Hale
Loewry Hott
Charles Jahr
Edward H. Klemmer
H. F. LeJeune
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WE GET THERE FIRST

CARNEGIE TECH — Our Heart is in our Mouth — 1919

SEA EASE

1921

Vol. No Record — Entered as First Class Mail in the Dead Letter Office — Price All we can get

NOTED AUTHOR ARRESTED

PROF "POP" HORACE R. THAYER

INSTRUCTOR AT CARNEGIE TECH

was arrested for running a gambling joint and indulging in other infamous practices. It appears that this other wise upright(?) person was apprehended while conducting a lottery of Stress Problems. The culprit was passing through the class with a number of cards, one of which was drawn by each student. The one drawing the lucky number getting the easy problem. We were unable to obtain definite information as to how much he received for a chance, but we think it was probably damn little. We understand that Pop is now out on bail.

XXXX

FOR BETTER OR FOR WORSE(?)

The Bachelor Club announce with tears in its eyes the downFall of Mr. Simmons. This calamity occured JUST prior to the summer camp. On receipt of our letter of condolence, he merely said; he was sorry we did not have enough to eat, because he got all he wanted.

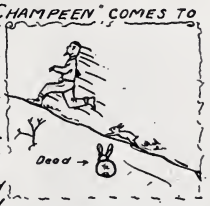
XXXX

We, the present Junior Class feel it our duty to apologize to the public for the last issue of the Sea Ease, edited by a gang of roughnecks now known as the Senior Civils.

XXXX

JIM THORP ALIAS "POP"

NEW 5MI. "CHAMPEEN" COMES TO LIGHT AT C.I.T. SUMMER CAMP.



Prof Thayer startled the sporting world by covering the 5mi. football course in 98 min. Those behind noticed several dead rabbits on the road side. "Doc" Marks examined these rabbits and found they had died from over exertion, trying to keep up with Pop. A strange thing about the race was; altho Pop started fully clothed, he came in, in short pants.

CAMP NOTES

Does everyone know what Indian Turnips taste like? If not ask Neal Campbell or any other Sr. Civil.

XXXX

Some one should remind Bert Munhall that we are now in cider season.

XXXX

We may not all understand what Maj(?) Stanton is saying when he speaks French but 50 to 1 he is cussing.

XXXX

Its an ill wind that blows no one good, as Bill Shakes says. Although the cats were damn poor they brought forth much poetry and music.

Camp Louise Carnegie

Where did we have to get up at six-thirty,
Jump out of bed on a cold, foggy morn—
Wait several years for a turn at the washstand,
Then while still waiting—hear the old breakfast horn?

Where did we all have to hurry and scurry
Up a steep incline, then fight for a seat
At a long table, where hundreds were waiting
Just for a chance to grab something to eat?

Where did we have to clean up (?) for inspection—
Gather our trappings and set out to learn
"How to survey in fourteen short lessons"—
Till twelve o'clock, then for dinner return?

Where did we loaf until one—then set out with
A transit, a level, a range pole and chain,
—Not stopping (excepting to stall a few hours)—
Then prompt at six we'd be eating again.

Where did the beds somersault about midnight?
Where'd we eat pie, after "Ginnies" new song?
And we'll agree that at "Louise Carnegie"
"Them was the HAPPY DAYS"—Boys, am I wrong?

—Cecil Lurie, '21

THE GEAR GROAN

PUBLISHED WEAKLY AND ENTERED AS DRY MATTER UNDER ACT OF JULY 1, 1919

NEWS OF THE JUNIOR MECHANICALS CLASS OF 1919

NOTICE - WHEN YOU HAVE FINISHED READING, PLACE A 1¢ STAMP HEREON AND IT WILL BE SENT TO DIXMONT - NO WRAPPING

DECEMBER 1919

10¢ THE COPY
11¢ IN CANADA

MECHANICALS BATTLE VALIANTLY BUT COMMERCIALS TAKE 14-0 DECISION

YODER AND NICHOL PLAY EXCELLENT GAME

SMITH OF BOOKKEEPERS ALSO STARS

On a fast field with a clear sky overhead and the tang of autumn in the air, another chapter of the Mechanical-Commercial football classic was fought out again this year.

Both sides uncorked a classy brand and the crowd of enthusiastic fans were agog with excitement from start to finish.

Nichol starred at open field running and got away for several spurts which would make Tom Davies look like a truck horse, and Yoder, the big Mechanical end, played a fine game, but was badly injured in the last round, receiving a dislocated shoulder.

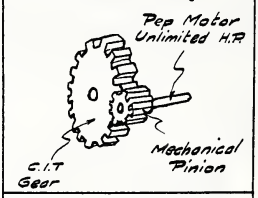
F.I. Smith and Copley were the bulwark of the bookkeepers and were hard men to stop.

Coach Hazel refereed and aside from the difficulty in hearing signals proved very satisfactory.

The head linesman, who is nameless here, was a plebe and matched his green hat to perfection.

The girls in Mellon Observatory watched the game thru opera glasses. Their cheers were a great inspiration to such fastidious players as Ravenscroft, who spat lustily before each play and chewed his way thru the game.

Best Cartoon of Day



OH - RED

Prof. Riggs I dont see how that pulley could rotate with 800# acting on each side.

Anthony Well it says its an idle pulley, doesn't it?

Prof. Riggs Yes but it's making 200 revolutions a minute.

PROF. TRINKS, having attended the Sophomore banquet, is said to be in favor of a class in Rotary and Reciprocating Motion with Labratory periods scheduled in the Academy.

This marks a distinct advance in the progress of scientific research and would greatly increase the asthetic value of our engineering courses.

LOST & FOUND

Al's chattels
Shorty's line
Dizzy's head
Ravey's sleep

REPORT OF BUREAU OF HEALTH FOR YEAR 1919.

Ravenscroft - Sleeping Sickness

A.C May — Sore Throat

Safety First — Black Eye

Rodzinsky — " "

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C. H. Wallace
L. A. Yoder
E. J. Reihm

Sophomores

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C. H. Grimm
L. C. Hewitt
C. G. Hauser
G. A. Henderson

The Commercial Club

The Commercial Club, as now organized, was founded last year, being an outgrowth of the old Fulcrum Club. The object of the club is to keep its members up to date on current business and engineering practice. This is done by holding smokers from time to time, and having addresses by prominent professional men—lawyers, engineers, advertising specialists and other men whose fields of endeavor in the business world are of peculiar interest to commercial engineers.

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P. H. Crago — C. F. Zobel — F. B. Faulkner

Tech Architectural Club

The gradual return of pre-war conditions brings the Tech Architectural Club back into its own. More than half of the present membership is made up of returned service men, who are more determined than ever to make the organization the pride of the Division of the Arts.

This year the club is planning an exhibition that will surpass all former successes, and the interest shown by both Faculty and members makes things look exceedingly promising.

The purpose for which the club was organized, namely, the promotion of interest in the study of architecture and the allied arts, is being followed most ardently, and the marked growth and recognition of the organization during this year is a sure sign that the members have not worked in vain.

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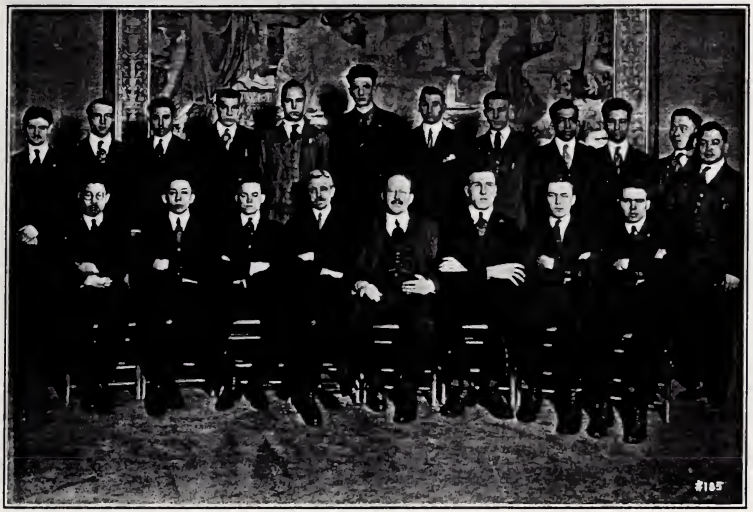

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The Buckeye Club

The Buckeye Club was organized in June, 1919, by students from the Buckeye State, Ohio. Men from other States claim that Ohioans have one great fault, and that is that they think that all the great men come from Ohio. While admitting that many of them come from Ohio, they claim that a few come from other States. Since Ohioans think so much of their State, it is but natural that they want to get acquainted with the other men, and much more so with the girls, from their home State. Since all the girls in the Margaret Morrison Division from Ohio have just recently joined the Buckeye Club, you will soon see a 99.99% membership among the men.

We have a large number of professors and instructors at Tech who are from our native State. They always turn out nearly 100% at the social functions. Perhaps you will find the reason indicated above.

All the smokers, card parties, and informal dances given this year were great successes, every one exhibiting true Ohioan spirit and enthusiasm.

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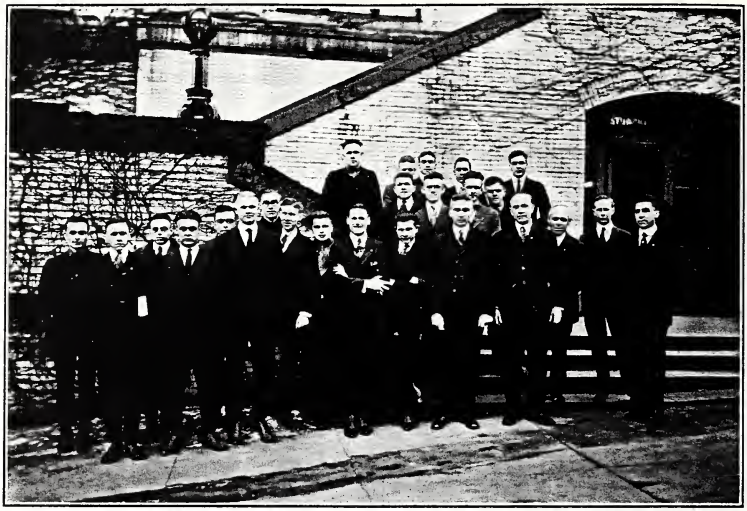

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An organization composed of students of the Heating and Ventilating Department of the Division of Industries. Meetings are held on each Wednesday, at which prominent speakers from the commercial world give beneficial talks.

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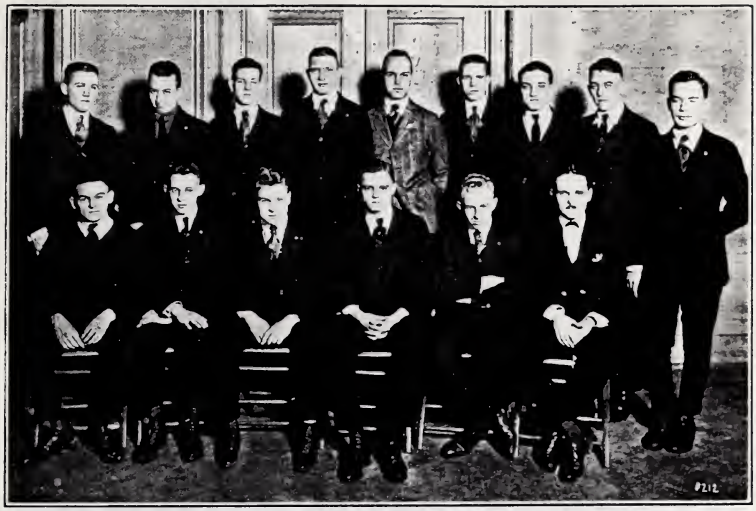
The Carnegie Camera Club

The Carnegie Camera Club was organized in January by a number of students who wished to promote the interest of the school in this most pleasant recreation. Before that time there were many clubs at Tech, representing various activities and professions, but none of which satisfied that particular aesthetic sense which impels one to portray the artistic by means of the lens. This was our reason for forming the society.

The purpose and aims of the club became immediately apparent in a glance at its name. The programs of the meetings consist of talks on the many phases of photography and allied subjects, by men who have achieved success in the art. At other meetings, lantern slides, prints, and enlargements, are exhibited, with open discussion. The dark-room is equipped with apparatus for performing the various photographic processes, thus giving opportunity to work up one's pictures.

Occasional trips will be held in the spring and autumn to the beauty-spots around Pittsburgh. These trips are most enjoyable, as well to those who do not photograph as to club members. Finally, it is intended to hold annual exhibitions of the best work of the year, that the pleasure of photography may be extended to the school as a whole.



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H. H. Wilson

Last fall, when the two-year students of the new Co-operative Dept. of Mining Engineering arrived at Carnegie Tech., they very unexpectedly found themselves confronted with the problem of organizing their members into some sort of a club.

Due to the lack of precedent the prospect seemed difficult, but with splendid spirit the two-year men soon formed themselves into the efficiently organized club called the "Miners".

This club has the distinction of being the first of its kind ever formed at an American college.

The chief reason for this distinction is the fact that the members of this club are all men who have had two years' or more practical experience in the coal fields of the United States.

The organization is a product of the best effort of its members, and it is hoped that this is the first step in a movement which will eventually result in a national organization of this type.

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EDITORIAL

THE OTHER DAY THE CHAIRMAN OF THE SCIENTIFIC STAFF ENJOYED A LITTLE RAMBLE THRU THAT PART OF OUR SCHOOL WHERE THE SCIENCE OF LOAFING & LOVING AS A FINE ART CAN BE STUDIED AT FIRST HAND. WE REFER TO THAT LITTLE BIT OF ELYSIUM-DESIGN SCHOOL - WHERE YOU DONT EVEN HAVE TO PUT LIGHTED PILLS IN UR POCKET WHEN A PROF. HEAVES IN SIGHT.

FOLLOWING A REPORT OF THE TRIP THE STAFF WAS IN FAVOR OF SUGGESTING THAT SCREENS BE PLACED AROUND THE STONE BENCHES IN THE HALL, AND THAT SOME WHITEWASH BE PUT IN ALL THE CORNERS LIKE IN THE FORD FACTORY AS SPITTING MAIL POUCH & 5 BROTHERS IN PLACES LIKE THAT TENDS TO BECOME A HABIT.

THE ARENA

by Blinks

FOR MEXICAN ATHLETES & OTHER BULL SLINGERS.

WEVE STARTED THIS HERE COLYM
WEV'E GOT TO KEEP IT FULL
MYSELF & SEVERAL OTHERS
CAN SLING A LINE OF BULL.

BUT EVEN GUYS LIKE US GET LOW
WITH OUR SUPPLY OF BUNQE
AND STUFF WE WRITE-ITS NG-BUM
SOME CALL IT JUST PLAIN JUNK

SO ALL U CONSTANT READERS
SIMPLY GOT TO COME TO BAT.
WITH STORIES, POEMS, ANYTHING
TO KEEP OUR COLYM FAT.

THE SCIENTIFIC STAFF OF THE GROAN HAS CAREFULLY INVESTIGATED A SYSTEM OF RATINGS FOR PROFS. BRIEFLY, IT IS:-

A RECITATION IS 50 MINUTES AND $\frac{100}{50} = 2$

$\therefore$ EVERY MINUTE WHICH A PROF TALKS ENTITLES HIM TO 2% SOME RATINGS AWARDED BY THE G.G.S. ARE:

SIMMONS - 2%
McCULLOGH - 41.5
BOLTON - 100
BARNES - exceeds 100 and is therefore purely imaginary.

FINANCIAL REPORT

Object:- To determine the financial status of our members

Apparatus:- Lots of Gaul

Data:

Safety First - $.00000
Shorty Maurer- .00000
M. Gore' -.00000
Blooey Foxon - .00000

Computations:-

$\pounds 0 = 0. \therefore \frac{d\pounds 0}{d\$} = 0$

Conclusions:-

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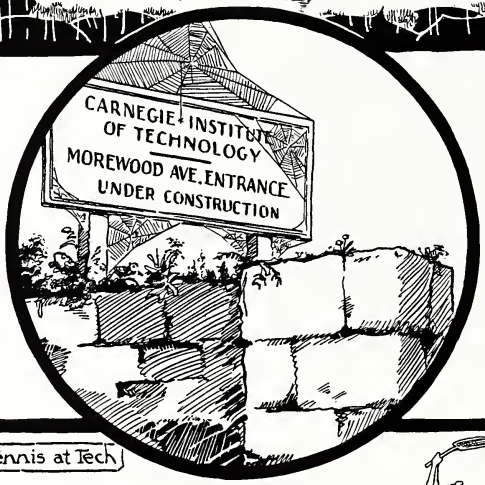
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The 1920 THISTLE BOARD wish to express their sincere appreciation to all those who helped in the compilation of this book. They wish especially to express thanks to the following persons for their very kind assistance:

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MISS ELIZABETH KUHN
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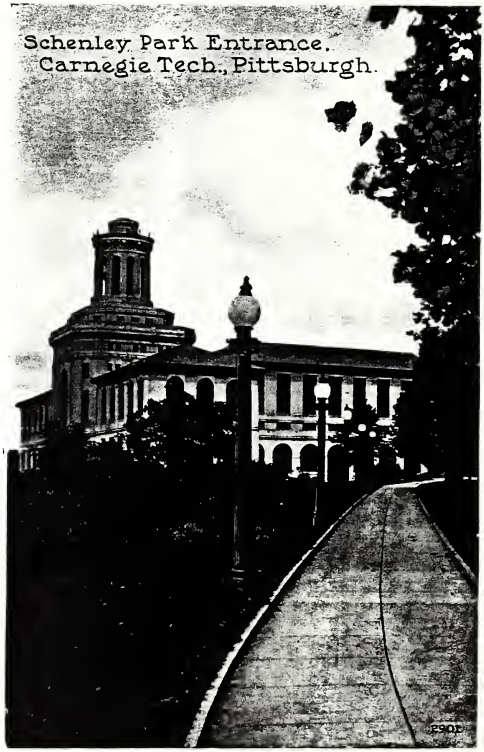
M. N. ROHRBACK
R. H. GUYTON
KARL F. HAUSAUER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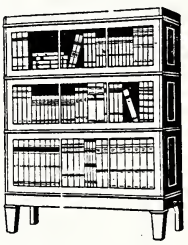

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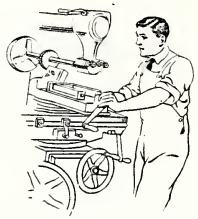

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